Final
Environmental Impact Report for the Lower Guadalupe River Flood Protection Project

Prepared by:

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Appendix A. Final Environmental Impact Report

Table

2-1 List of Comment Letters on the Draft Environmental Impact Report for the Lower Guadalupe River Flood Protection Project 2-1

Acronyms

af	acre-feet
APM	Automated People Mover
BMP	best management practices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
City	City of San Jose
cm	centimeter
cms	cubic meters per second
Corps	U.S. Army Corps of Engineers
County	Santa Clara County
DFG	California Department of Fish and Game
District	Santa Clara Valley Water District
DTSC	California Department of Toxic Substances Control
EAP	Emergency Action Plan
EIR	environmental impact report
EIS	environmental impact statement
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GRR	General Re-Evaluation and Environmental Report
I-280	Interstate 280
I-880	Interstate 880
km	kilometer
LCA	Local Cooperative Agreement
LGRP	Lower Guadalupe River Flood Protection Project
MMP	mitigation and monitoring plan
NEPA	National Environmental Policy Act
NHC	Northwest Hydraulic Consultants
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
PG&E	Pacific Gas and Electric Company
ROW	right-of-way
SEMS	Standardized Emergency Management System
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SMP	Stream Maintenance Program

SR	State Route
SRA	shaded riverine aquatic
SWPPP	stormwater pollution prevention plan
UPRR	Union Pacific Railroad
U.S. 101	U.S. Highway 101
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Chapter 1
Introduction

The comments on the Draft Environmental Impact Report (EIR) for the Lower Guadalupe River Flood Protection Project (LGRP) that are included in this Final EIR for the LGRP include written comments received during or shortly after the public review period, and oral comments made at the public hearing on October 2, 2001. In addition, the reader should refer to pages O-1 through O-5 for an overview of changes that have been made from the Draft EIR to the Final EIR.

Certification and Project Selection Process

The Santa Clara Valley Water District (District) board of directors will hold a public hearing to consider certification of the Final EIR. To certify the Final EIR, the Board must find that

- the Final EIR has been completed in compliance with the California Environmental Quality Act (CEQA) and
- the Final EIR was presented to the decision-making body of the lead agency, and the decision-making body reviewed and considered the information contained in the Final EIR before selecting a project (State CEQA Guidelines, Section 15090).

If the District certifies the Final EIR, the District will make the final decision regarding which project alternative will be selected for implementation, and a Notice of Determination will be filed. At the time of project selection, the decision-making body, that is, the District board of directors, must consider the information presented in the Final EIR. The decision makers must balance the benefits of a proposed alternative against its unavoidable environmental risks. If the benefits outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable. If the board makes such a decision, it must support the action by writing the specific reasons for approval; this is called a *statement of overriding considerations* and must be included in the record of project approval (State CEQA Guidelines, Section 15093).

Public Involvement During Preparation of the Final Environmental Impact Report

The public comment period for the Draft EIR began on August 22, 2001, with an announcement of the availability of the Draft EIR. The formal public comment period closed on October 12, 2001. However, comments received after the close of the public comment period have been considered in the preparation of the Final EIR. On October 2, 2001, a public hearing on the Draft EIR was held before the District board of directors in the community of Alviso. About 50 members of the public attended.

Copies of the Draft EIR were distributed to federal and state agencies, local governments, elected officials, groups, and libraries. The Draft EIR was provided to others upon request, at no cost.

Copies of the Draft EIR were available for review at the District office and at 8 public libraries in San Jose.

Use of Comment Summaries

The full text of all written comments and comments in the transcript of the public hearing are included in this Final EIR. In addition, to make it easier to read the Responses to Comments, a summary of each comment is inserted in italics just before each response. This summary does not substitute for the actual comment; the reader is urged to read the full original text of all comments. The responses are prepared in answer to the full text of the original comment, and not to the abbreviated summary.

Consideration of Recirculation

If significant new information is added to an EIR after public review, the lead agency is required to recirculate the revised document (State CEQA Guidelines, Section 15088.5, and 40 Code of Federal Regulations [CFR] 1502.9). *Significant new information* includes, for example, a new significant environmental impact or a substantial increase in the severity of an impact. New information is not considered significant unless the document is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project, or a feasible way to mitigate or avoid such an effect that the proponent has declined to implement. In response to comments, several changes have been made to the Draft EIR. However, no impacts described as less than significant in the Draft EIR have been reevaluated as significant as a result of these changes. Also, no substantial increase in the severity of impacts has been identified as a result of information brought forward in the comments. In summary, no new significant impacts have been identified and, as a result, there is no need to recirculate the Draft EIR.

Responses to Comments

The regulations for implementing CEQA direct the lead agency to respond to substantive public comments on the Draft EIR. All comments received during the comment period are responded to in this Final EIR. The range of possible responses includes requiring specific mitigation measures, modifying alternatives, supplementing analyses, making factual corrections, and explaining why comments do not warrant further agency response. In cases where public response has been especially voluminous, the agency may summarize or consolidate similar comments, as long as all substantive issues are represented.

This Final EIR includes Master Responses that respond to common questions, and responses to each individual comment on the Draft EIR. Editorial revisions to the Draft EIR made by the EIR authors in response to comments are shown in both the Master Responses and Responses to Comments. Text revisions are formatted in revision fashion: ~~strikeouts~~ indicate removed text and underlines indicate additional text.

Chapter 2

Comments on the Draft Environmental Impact Report

The following list shows the comment letters and oral comments that were received by the District. The District received 27 letters commenting on the Draft EIR. In addition, the reader should refer to pages O-1 through O-5 for an overview of changes that have been made from the Draft EIR to the Final EIR.

This tabulation is followed by copies of the letters and by public hearing and meeting transcripts, which are annotated to indicate comment numbers. Letters commenting on the Draft EIR were assigned numbers from 1 through 27. Oral comments received at the public hearing were annotated separately from letters. These numbers correspond to the responses that are presented in chapter 4, "Responses to Comments."

Table 2-1. List of Comment Letters on the Draft Environmental Impact Report for the Lower Guadalupe River Flood Protection Project

Letter #	Commenter
1	National Marine Fisheries Service, Patrick J. Rutten (October 12, 2001)
2	U.S. Environmental Protection Agency, Tim Vendlinski, Chief, Wetlands Regulatory Office
3	Department of Toxic Substances Control, Guenther W. Moskat, Chief, Planning And Environmental Analysis Section
4	Department of Toxic Substances Control, Barbara J. Cook, P.E., Chief, Northern California Coastal Cleanup Operations Branch
5	California Department of Fish and Game, Robert W. Floerke, Regional Manager, Central Coast Region (October 4, 2001)
6	San Francisco Bay Regional Water Quality Control Board, Paul F. Amato, Environmental Specialist
7	California Department of Transportation, Jean C. R. Finney, District Branch Chief (October 10, 2001)
8	California Department of Transportation, Randell H. Iwasaki, Acting District Director (October 4, 2001)
9	California Governor's Office of Planning and Research, State Clearinghouse, Terry Roberts, Senior Planner (October 9, 2001)

Table 2-1. Continued

Letter #	Commenter
10	County of Santa Clara, Roads and Airports Department, Felix Lopez, Project Engineer (September 27, 2001)
11	County of Santa Clara, Roads and Airports Department, Felix Lopez, Project Engineer (October 12, 2001)
12	City of San Jose, Department of Planning, Building and Code Enforcement, Janis Moore, Planner II (October 12, 2001)
13	City Of Santa Clara, Engineering Department, Gustavo Gomez, Principal Engineer (October 11, 2001)
14	City Of Santa Clara, Engineering Department, Gustavo Gomez, Principal Engineer (July 28, 2000)
15	Guadalupe-Coyote Resource Conservation District, Nancy Bernardi, Board of Directors (October 15, 2001)
16	Stoel Rives, Anne E. Mudge (October 3, 2001)
17	Stoel Rives, Anne E. Mudge (October 12, 2001)
18	Schaaf & Wheeler Consulting Civil Engineers, Kirk Wheeler, P.E., Principal (October 15, 2001)
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23	Libby Lucas (October 21, 2001)
24	James T. Harper (October 8, 2001)
25	Santa Clara County Streams for Tomorrow, Keith R. Anderson, Environmental Advocate (October 5, 2001)
26	Citizens Committee to Complete the Refuge, Florence M. Lariviere, Chairwoman (October 11, 2001)
27	Western Waters Canoe Club, Lawrence M. Johmann, P.E., C.Q.E, C.R.E. (October 12, 2001)
Public Hearing	Comments Received at the Special Meeting of the Santa Clara Valley Water District Board of Directors, October 2, 2001

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

Letter 1

In reply please refer to:
October 12, 2001 151422SWR01SR891: FS

Dennis Cheong, Project Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3614

Dear Mr. Cheong:

Thank you for the opportunity to comment on the August 2001 Draft Environmental Impact Report (DEIR) for the Lower Guadalupe River Flood Protection Project (LGRP). The National Marine Fisheries Service (NMFS) has reviewed the DEIR and is in general concurrence with the alternatives analysis. However, NMFS is concerned with potential impacts to chinook salmon and steelhead associated with flooding bayland areas. NMFS offers the following general and specific comments:

GENERAL COMMENTS

Under current conditions, juvenile salmon and steelhead can be entrapped in bayland areas (i.e. salt ponds) near the mouth of the Guadalupe River during flood events that spill over existing levees. It is likely that all entrapped salmonids are lost, because there is no adequate connection that allows juvenile fish stranded in the salt ponds during flood events to escape back to Alviso and/or Guadalupe Sloughs. The proposed project substantially increases the volume of flood water spilling to salt ponds west of Alviso Slough (16-22%), and, thus, substantially increases the risk of entrapment and loss of migrating salmonids in the Alviso Baylands. Additionally, the proposed draw down of the flooded ponds through the use of pumps poses the risk of entrainment through a pump to juvenile chinook salmon and federally threatened steelhead. 1-1

As an alternative approach to mitigating flooding in the Alviso Slough area, the Santa Clara Valley Water District should consider acquisitions or easements on the remaining privately owned ponds which will allow for breaching the levees. Through restoration of tidal action between the ponds and San Francisco Bay, fish carried into the salt ponds during flood events would be provided an opportunity to escape through a connection with Alviso and/or Guadalupe Sloughs. Such an approach would restore historic wetlands functions, avoid fish entrapment, negate the need for lengthy pumping of the ponds after a major flood event, and shorten the period of pumping following the smaller flood flows that occur on a regular basis at Alviso Slough.

SPECIFIC COMMENTS

Fish and bypass flows

1. Diversion and dewatering operations during project construction should comply with the District's Best Management Practices (BMPs) to maintain habitat connectivity of the stream and to prevent the mobilization of fine sediments into creek waters. Diversions should maintain conditions required for fish passage through the project area, obviating the need to use fish traps (pages 2-31 and 2-32) and to transport captured fish (page 2-31). Adequate fish passage conditions will be met as long as the diversion (a) maintains contiguous flows (b) presents no vertical drops exceeding six inches (c) maintains water velocities that do not exceed eight feet per second, and (d) maintains adequate water depths (consistent with normal conditions in the project reach). Trapping of fish in isolated pools should be avoided to the fullest extent possible. 1-2

2. Potential use of pumps (page 2-31) to divert streamflow during in-channel construction activity should be avoided unless screened. NMFS Fish Screening Criteria for Anadromous Salmonids (available at http://swr.nmfs.noaa.gov/hcd/fishscrn.pdf) should be incorporated into the Fish Management Program to minimize effects of any diversion pumping on salmonids. 1-3

3. Coffer dams blocking upstream fish passage between September 1 and October 15 could potentially impede migration of adult salmonids (page 2-31). NMFS recommends that upstream passage at coffer dams be provided for *all* salmonids during this time period. The number of chinook in the Guadalupe River is very small, and barriers to upstream migration represent a potentially significant impact to the population. These fish are difficult to observe, and it is likely that the majority of migrating fish will *not* be observed. At the first sign of adult salmonids migrating upstream, coffer dams should be removed. 1-4

Riparian vegetation

1. Approximately one percent of total shaded riverine aquatic (SRA) vegetation (4.65 acres) in the project area is proposed (page 3G-15) to be removed due to vegetation management or construction activities. In a highly modified and degraded stream system such as the Guadalupe River, the loss of any riparian habitat along the low-flow channel should be avoided. If riparian vegetation removal is absolutely necessary, NMFS recommends a replacement ratio of 3:1. "Likely increases" in future vegetation coverage along the low-flow channel are not adequate replacement of vegetation lost due to project construction. 1-5

2. Why is a 100-150 foot wide riparian vegetation buffer specified along the low-flow channel for reaches D and E (pages 5-5 and 5-7 of the DEIR's accompanying Engineer's Report), while a buffer of only 39.4 feet is proposed for reaches B and G (pages 5-3 and 5-12, Engineer's Report)? On what basis was the smaller figure selected? 1-6

3. "Clearing and snagging" activities (page 5-5, Engineer's Report) conducted within the riparian buffer area will reduce habitat complexity by removing large woody debris and cover. This may adversely affect salmonid habitat by exposing fish to predators and removing refuge areas fish use during high flows. 1-7

4. Herbicide use is proposed as standard practice for vegetation management (page 5-8, Engineer's Report). Details on the timing of their use and measures to minimize their adverse effects on the stream ecosystem are not presented, so these specifics cannot be addressed at the present time. However, page 3G-7 of the DEIR states that under existing conditions the "growth and survival of fish and other aquatic organisms may be reduced by the toxic effects of insecticides, metals, nutrients, herbicides and suspended solids." Because the use of herbicides in the proposed project could adversely affect fish health and survival, these chemicals should be used for vegetation management only when hand and mechanical methods are not practical. 1-8

Channel structures

1. In reach A, aggressive vegetation removal is proposed downstream of the I-880 bridge (page 5-1, Engineer's Report). Flood flow velocities will increase as a result, and to mitigate this condition, the installation of rock weirs is proposed. The vegetation's velocity-slowing function is being replaced by that of the proposed rock structures, which cannot provide the same habitat functions currently provided by native vegetation. Although NMFS supports adding complexity to the stream channel to enhance fish habitat as part of this project, it is not clear why vegetation is proposed to be removed only to be replaced by structures providing a similar velocity-slowing function. It is also not stated whether these rock weirs are designed to withstand a 17,000 cfs flood flow. 1-9

2. A transition zone between the grade control structures and other structures is proposed for reach A (page 5-2, Engineer's Report), and additional bank protection structures are proposed for reaches A and B (5-2 and 5-3, Engineer's Report). Construction materials for these structures are not specified, but are likely to include concrete, which will preclude riparian canopy growth along the low-flow channel. Greater detail on this proposed transition zone should be provided. As an alternative that offers the potential to achieve flow and erosion management goals while providing for natural riparian habitat, NMFS recommends that bioengineering techniques and materials be utilized to the maximum extent practicable. 1-10

Sediment and other construction impacts

1. An Erosion and Sediment Control Plan will be implemented by the project contractor and overseen by the District (page 2-28). The District's BMPs should be applied where possible instead of the less rigorous California Construction BMPs. 1-11

2. A new, raised bridge is proposed for the Highway 237 overcrossing of the Guadalupe River. Because the potential impacts, including fish stranding, of the proposed Highway 237 bypass alternative are greater than those expected to result from construction of the bridge, NMFS supports the raised bridge alternative. However, construction and demolition of the proposed bridge replacement (pages 3G-13 and 3G-14) lacks sufficient detail to evaluate its potential impacts on fish and fish habitat. No method for demolition of the decommissioned bridge is specified. Because significant disturbance to surrounding habitat may occur from the removal of bridge sub-structures, more information should be provided about the methods that are proposed for this process and for minimizing impacts to salmonids and their habitat. 1-12

Project timing

1. The project proposes (page 2-32) limiting in-channel construction activities to April 15-October 15, with stream dewatering, stream crossings and streambed work commencing after May 1 if specified stream-monitoring criteria are met. Although daily average water temperature can be easily measured for the stream-monitoring criteria, the absence of outmigrating salmonids is more difficult to detect and is highly dependent upon the quality of the downstream trapping program. To ensure that the downstream migrant traps are adequate to detect the presence or absence of outmigrating salmonids, NMFS would appreciate the opportunity to review and approve the proposed sampling program. 1-13

Alviso Baylands fish stranding

Currently, flood capacity of the Alviso Slough is approximately 6800 cfs – less than a 10-year flood event (page 3A-13, figure 3-3). Overtopping of the levees in this area into the community of Alviso and the adjacent salt ponds owned by the Cargill Corporation and the US Fish and Wildlife Service occurs relatively frequently (six times in the past 28 years; page 3A-8 and 3G- 1-14 additional 3000 cfs to Alviso Slough area (a 16-22% increase; page 3A-14) during a design flood event. The mitigation proposed for this additional flow relies on raised levees and pumping stations to be located as needed at Ponds A5 through A8.

This baylands component of the LGRP presents the most problems for anadromous salmonids including the threatened Central California Coast steelhead. Page 3G-21 of the DEIR discusses the potential for fish stranding within baylands ponds, but does not indicate that such passage will be provided as part of the project. NMFS recommends passage be provided between the salt ponds and Alviso and/or Guadalupe Sloughs to ensure that salmonids do not become stranded and lost in the ponds as flood flows recede. In addition, the pumping schemes designed to reduce the depth and duration of floodflows in Ponds A5 to A8 have the potential to injure or kill salmonids. Because chinook salmon and steelhead may become trapped in these ponds, unscreened pumping should not be employed to draw down water levels in the ponds. To address these issues associated with fish entrapment in salt ponds and entrainment in pumps, NMFS recommends consideration of an alternative approach in this area that includes land acquisitions or easements on the remaining privately owned salt ponds combined with a plan to breach the levees between the ponds and San Francisco Bay. This would address the above issues and restore tidal action and historic wetlands functions to the bayland ponds area. 1-14 cont'd

If you have any questions concerning these comments, please contact Erik Schmidt of my staff at (707) 575-6083.

Sincerely,

Patrick J. Rutten

Patrick J. Rutten
Northern California Supervisor
Protected Resources Division

cc: Jim Lecky, NMFS, Long Beach
Dave Johnston, CDFG, Santa Cruz
Jane Hicks, US Army Corps of Engineers, San Francisco
Mark Littlefield, USFWS, Sacramento

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Letter 2

October 12, 2001

Mr. Dennis Cheong
Project Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

RE: Draft EIR: Lower Guadalupe River Planning Study, Santa Clara Valley Water District, San Jose, California

Dear Mr. Cheong:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced Draft Environmental Impact Report (EIR), dated August 2001, regarding the planning phase for the Lower Guadalupe River Flood Protection Project (LGRP). The proposed project is a capital project along approximately 6.5 miles of the Guadalupe River between Interstate 880 and the Union Pacific Railroad. The project purpose is to restore flood conveyance capacity to that reach of the Guadalupe River to 17,000 cfs during flood events. These comments have been prepared under the authority of, and in accordance with the provisions of the Federal Guidelines (40 CFR 230) promulgated under the Section 404(b)(1) of the Clean Water Act (CWA).

We have the following comments on the DEIR:

ALTERNATIVES

We find the discussion of the "Summary of Alternatives Screening Process" on pages 2-1 through 2-11 to be incomplete. Though it is stated that "watershed-oriented solutions" were explored, the fact that alternatives such as upstream storage facilities, reservoir operations, etc.. were rejected as infeasible and costly in the narrow terms of the LGRP, indicates that a full exploration of these options was not done. For "watershed-oriented" solutions to be found, a "package" of ideas most often must be found which include the ideas listed on page 2-2, as well as others, such as land acquisition to restore floodplain capacity, that together would form a "watershed alternative". The District is most probably right in that each option as a stand-alone alternative would be found to be too costly and infeasible, but if pieced together with each option doing a portion of the work of flood retention, flood storage, groundwater recharge, etc.. a "watershed-oriented" solution might indeed be found. 2-1

CUMULATIVE IMPACTS

Inasmuch as the DEIR fails to look at alternatives holistically throughout the Guadalupe River watershed, it has also not done a complete job of looking at cumulative impacts from the Upper, Downtown and Lower Guadalupe capital projects. In a letter to the Corps of Engineers, dated July 27, 2001 and copied to the District, EPA highlighted our view that the three capital projects on the Guadalupe River have "environmental, economic and safety impacts... (that)... are clearly connected" and "indirect and cumulative impacts throughout the Guadalupe River watershed... have not been addressed in the two other Guadalupe River NEPA documents." The DEIR states that the cumulative Lower Guadalupe project impacts are closely associated with the impacts identified for Downtown Guadalupe Project, though the findings of impacts for the Downtown Project were done in the absence of any information on the Lower Guadalupe proposed project alternative. The cumulative impacts relating to the Lower Guadalupe Project stated on pages 4-9 2-2
through 4-20 provide some detail on what the District expects project impacts to be, though we continue to have the following concerns.

Hydrologic and Hydraulic Conditions

EPA does not support the conclusion that the proposed project alternative which includes raising levees and constructing floodwalls would have no substantial impact in the volume or timing of freshwater flow to the south bay, especially when considered with other channel modifications happening under the Upper and Downtown Guadalupe Projects. Experience has shown us that these floodwall and levee systems often fail, as well as having a detrimental effect on the stream by eliminating vegetation in the stream corridor and causing an increase in the velocity of the stream which can result in stream down cutting and increased erosion. EPA submitted this comment to the District previously in a letter to George Fowler, dated June 28, 2000.

Vegetation

EPA is concerned that preservation of riparian vegetation be incorporated into project activities where ever possible in the Lower Guadalupe River, because of the important benefits that a riparian corridor offers a stream, for instance fish habitat, and maintenance of water quality and water temperatures. There are reaches of the Lower Guadalupe River, near Montague Expressway for example, which have healthy riparian corridors 2-3
which should be preserved. For the riparian acreage expected to be impacted (4.65 acres) replacement plantings on Reach A are being proposed at a 0.5:1 ratio. Because there will be temporal loss of riparian habitat between habitat impacts and habitat replacement, a ratio of greater than 0.5:1 is warranted.

MERCURY

EPA is pleased to see the proposed "Mercury Monitoring Plan" on page 3C-24 to address potential mercury deposition from flood flows. However, in addition to inflow measurements of 2-4
mercury, EPA would like to see added measurement of the sediment deposited in the salt ponds, because, as the DEIR itself states, "...sediment is unlikely to be uniformly distributed in

floodflows throughout the water column..." so relying on water samples from which a potential mercury load will be estimated is not adequate. Baseline data on the existing levels in the salt ponds should be gathered and subsequent samples should taken after each flood flow event to determine whether sediment would then have to be removed. If sediment needs to be removed, the EIR should provide a plan on how that sediment will be dredged and then disposed of or reused. 2-4 cont'd

BAYLANDS MITIGATION MEASURE

The Baylands Mitigation Measure might be better served by being described as another "reach" of the flood protection project as it cited to have water quality impacts, vegetation impacts, and wildlife impacts, all of which require mitigation measures. There are outstanding concerns regarding the potential for mercury accumulation in the salt pond sediments from this portion of the project which, as stated above, need to be addressed in the Mercury Monitoring Plan. EPA also has outstanding concerns on the potential for fish strandings within the salt ponds due to floodwater flows into the ponds. The issue of fish stranding was discussed at a LGRP meeting on May 18, 2001 at the National Marine Fisheries Office with the District and Gary Stern of NMFS. EPA will defer to determinations by NMFS as to whether the operations proposed in the Baylands Mitigation Measure present the same fish stranding threat as presently exists, however, we feel the DEIR needs to provide more detail as to the present conditions if the District is to substantiate such a finding. 2-5

Thank you for the opportunity to review this EIR, and if you have any questions, please call Luisa Valiela of my staff at (415) 744-1991.

Sincerely,

Tim Vendlinski, Chief
Wetlands Regulatory Office

cc: Bob Smith, USCOE (San Francisco)
Paul Amato, RWQCB (Oakland)
Margaret Roper, CDFG (Yountville)
Gary Stern, NMFS (Santa Rosa)
Mark Littlefield, USFWS (Sacramento)

Department of Toxic Substances Control

Edwin F. Lowry, Director
1001 "I" Street, 25th Floor
P.O. Box 806
Sacramento, California 95812-0806

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

Letter 3

August 29, 2001

Terry Neudrof
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Re: Lower Guadalupe River Project

The Department of Toxic Substances Control (DTSC) is in receipt of the environmental document identified above. Based on a preliminary review of this document, we have determined that additional review by our regional office will be required to fully assess any potential hazardous waste related impacts from the proposed project. The regional office and contact person listed below will be responsible for the review of this document in DTSC's role as a Responsible Agency under the California Environmental Quality Act (CEQA) and for providing any necessary comments to your office: 3-1

Barbara Cook
Site Mitigation
700 Heinz Avenue, Suite 200
Berkeley, California 94710

If you have any questions concerning DTSC's involvement in the review of this environmental document, please contact the regional office contact person identified above.

Sincerely,

Guenther W. Moskat, Chief
Planning and Environmental Analysis Section

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web site at www.dtsc.ca.gov.

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201511

Letter 4

Department of Toxic Substances Control

Edwin F. Lowry, Director
700 Heinz Avenue, Bldg. F, Suite 200
Berkeley, California 94710-2721

Winston H. Hickox
Secretary for
Environmental
Protection

Gray Davis
Governor

September 21, 2001

Terry Neudorf
Environmental Planner
Santa Clara Valley Water District, Watershed Management Unit
5750 Almaden Expressway
San Jose, California 95118

Dear Mr. Neudorf,

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Lower Guadalupe River Project (LGRP)[SCH#2000042051]. This project would construct various flood control facilities as well as provide soil and vegetative management plans on the lower Guadalupe River in San Jose for better control of floodflow. The Guadalupe River begins in the southern area of San Jose at the junction of Alamitos Creek and Guadalupe Creek. The river flows north approximately 14 miles through San Jose and Santa Clara and discharges into the southern end of San Francisco Bay through the Alviso Slough.

As you may be aware, the California Department of Toxic Substances Control (DTSC) oversees the cleanup of sites where hazardous substances have been released pursuant to the California Health and Safety Code, Division 20, Chapter 6.8. As a Resource Agency, DTSC is submitting comments to ensure that the environmental documentation prepared for this project to address the California Environmental Quality Act (CEQA) adequately addresses any required remediation activities which may be required to address any hazardous substances release.

Historical groundwater and soil contamination indicate the need for investigation and characterization of chemical concentrations throughout the project site. Mercury, pesticides, metals, and asbestos materials sampling, removal, and handling need to be addressed in the soil management plan. For example, stockpiling issues need to be addressed and be in compliance with section 25123.3 of the California Health and Safety Code. The soil management plan should also include risk-based criteria for reuse of soils. The DEIR states that soils may be reused for construction if contaminant levels are below regulatory thresholds. Please be aware that soils that are not determined to be a hazardous waste may pose an unacceptable risk to human health and the environment. The DEIR also describes several areas, Reach A, C, E, F, and 4-1

G, that require further sampling. We agree that further sampling be conducted to determine whether this is an issue which will need to be addressed in the CEQA compliance document. If hazardous substances have been released, they will need to be addressed as part of this project. 4-1 cont'd

For example, if the remediation activities include the need for soil excavation, the CEQA document should include: (1) an assessment of air impacts and health impacts associated with the excavation activities; (2) identification of any applicable local standards which may be exceeded by the excavation activities, including dust levels and noise; (3) transportation impacts from the removal or remedial activities; and (4) risk of upset should be there an accident at the Site 4-2

DTSC can assist your agency in overseeing characterization and cleanup activities through our Voluntary Cleanup Program. A fact sheet describing this program is enclosed. We are aware that projects such as this one are typically on a compressed schedule, and in an effort to use the available review time efficiently, we request that DTSC be included in any meetings where issues relevant to our statutory authority are discussed. 4-3

DTSC is currently administering the $85 million Urban Cleanup Loan Program, which will provide low-interest loans to investigate and cleanup hazardous materials at properties where redevelopment is likely to have a beneficial impact to a community. The program is composed of two main components: low interest loans of up to $100,000 to conduct preliminary endangerment assessments of underutilized properties; and loans of up to $2.5 million for the cleanup or removal of hazardous materials also at underutilized urban properties. These loans are available to developers, businesses, schools, and local governments. A fact sheet regarding this program is attached for your information.

If you have any questions or would like to schedule a meeting, please contact Sarah Stenehjem of my staff at (510)540-3828. Thank you in advance for your cooperation in this matter.

Sincerely,

Barbara J. Cook, P.E., Chief
Northern California - Coastal Cleanup
Operations Branch

Enclosures

cc: Governor's Office of Planning and Research
State Clearinghouse
P. O. Box 3044
Sacramento, CA 95812-3044

Guenther Moskat
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Dennis Cheong
Project Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

FACT SHEET
SEPTEMBER 2000

Urban Cleanup Loan Program

Overview

California is on the leading edge when it comes to programs and policies to stimulate the redevelopment of Brownfields – abandoned, idled or under-used properties where expansion or redevelopment is complicated by real or perceived environmental contamination. Frequently, these properties, once the source of jobs and economic benefits to the entire community, lie abandoned for fear of the contamination and the liability it implies.

The $85 million Urban Cleanup Loan Program – which is currently under development by the Department of Toxic Substances Control – will provide new financial assistance tools to help developers, businesses, schools and local governments accelerate the pace of cleanup and redevelopment at these sites.

There will be two main components:

Investigating Site Contamination Program

- Provides low-interest loans of up to $100,000 to conduct preliminary endangerment assessments of underutilized urban properties.
- Loan repayment over a period of two years, if loan recipient buys the property.
- If property is determined not to be economically feasible to purchase, up to 75 percent of the loan amount can be waived by the State.

Cleanup Loans and Environmental Assistance (CLEAN) Program

- Provides low-interest loans of up to $2.5 million for the cleanup or removal of hazardous materials at properties where redevelopment is likely to have a beneficial impact on the property values, economic viability and quality of life of a community.

Restoring contaminated property can help bring life and strength to a community. Making a once toxic area viable again means more jobs, an enhanced tax base and a sense of optimism about the future. Together, the programs that make up California's Urban Cleanup Loan Program will make it easier for such sites to be redeveloped and become vital functioning parts of their communities.

For more information, call (916) 324-0706.

California Environmental
Protection Agency

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

The Voluntary Cleanup Program

In 1993, the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) introduced this streamlined program to protect human health and the environment, ensure investigation and cleanup is conducted in an environmentally sound manner and facilitate the reuse and redevelopment of these same properties. Using this program, corporations, real estate developers, other private parties, and local and state agencies entering into Voluntary Cleanup Program agreements will be able to restore properties quickly and efficiently, rather than having their projects compete for DTSC's limited resources with other lower-priority hazardous waste sites. This fact sheet describes how the Voluntary Cleanup Program works.

Prior to initiation of the Voluntary Cleanup Program, project proponents had few options for DTSC involvement in cleaning up low-priority sites. DTSC's statutory mandate is to identify, prioritize, investigate and cleanup sites where releases of hazardous substances have occurred. For years, the mandate meant that, if the site presented grave threat to public health or the environment, then it was listed on the State Superfund list and the parties responsible conducted the cleanup under an enforcement order, or DTSC used state funds to do so. Because of staff resource limitations, DTSC was unable to provide oversight at sites which posed lesser risk or had lower priority.

DTSC long ago recognized that no one's interests are served by leaving sites contaminated and unusable. The Voluntary Cleanup Program allows motivated parties who are able to fund the cleanup – and DTSC's oversight – to move ahead at their own speed to investigate and remediate their sites. DTSC has found that working cooperatively with willing and able project proponents is a more efficient and cost-effective approach to site investigation and cleanup. There are four steps to this process:

√ **Eligibility and Application**
√ **Negotiating the Agreement**
√ **Site Activities**
√ **Certification and Property Restoration**

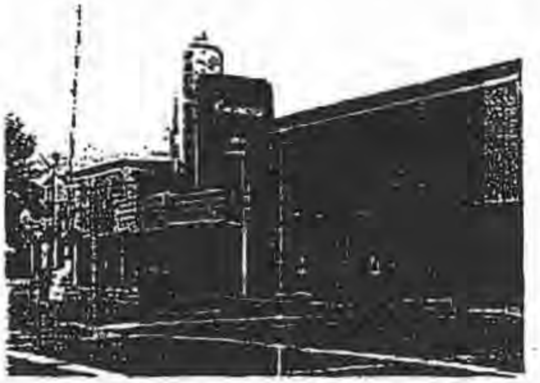
The rest of this fact sheet describes those steps and gives DTSC contacts.

August 1999

The Voluntary Cleanup Program

Step 1: Eligibility and Application

Most sites are eligible. The main exclusions are if the site is listed as a Federal or State Superfund site, is a military facility, or if it falls outside of DTSC's jurisdiction, as in the case where a site contains only leaking underground fuel tanks. Another possible limitation is if another agency currently has oversight, e.g. a county (for underground storage tanks). The current oversight agency must consent to transfer the cleanup responsibilities to DTSC before the proponent can enter into a Voluntary Cleanup Program agreement. Additionally, DTSC can enter into an agreement to work on a specified element of a cleanup (risk assessment or public participation, for example), if the primary oversight agency gives its consent. The standard application is attached to this fact sheet.



Jack London Square Theater, Oakland: Under the Voluntary Cleanup Program, a nine-screen theater was built atop a former Pacific Gas & Electric town gas site, creating a regional entertainment hub.

If neither of these exclusions apply, the proponent submits an application to DTSC, providing details about site conditions, proposed land use and potential community concerns. No fee is required to apply for the Voluntary Cleanup Program.

Romero Ranch, Santa Nella: A Voluntary Cleanup Agreement enabled the Nature Conservancy to use the land to preserve natural habitat and promote wildlife development rights.

Step 2: Negotiating the Agreement

Once DTSC accepts the application, the proponent meets with experienced DTSC professionals to negotiate the agreement. The agreement can range from services for an initial site assessment, to oversight and certification of a full site cleanup, based on the proponent's financial and scheduling objectives.

The Voluntary Cleanup Program agreement specifies the estimated DTSC costs, project scheduling, and DTSC services provided. Because every project must meet the same legal and technical cleanup requirements as State Superfund sites, and because DTSC staff provide oversight, the proponent is assured that the project will be completed in an environmentally sound manner.

August 1999

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
SITE MITIGATION STATEWIDE CLEANUP OPERATIONS

VOLUNTARY CLEANUP PROGRAM APPLICATION

The purpose of this application is to obtain information necessary to determine the eligibility of the site for acceptance into the Voluntary Cleanup Program. Please use additional pages, as necessary, to complete your responses.

SECTION 1 PROPONENT INFORMATION

Proponent Name ______________________________

Principal Contact Name

Phone ( )

Address ______________________________

____

Proponent's relationship to site

____

____

Brief statement of why the proponent is interested in DTSC services related to site

SECTION 2 SITE INFORMATION

Is this site listed on Calsites? ☐ Yes ☐ No
If Yes, provide specific name and number as listed

Name of Site ______________________________

Address	City	County	ZIP
______________	______________	______________	______________

(Please attach a copy of an appropriate map page)

SECTION 2 SITE INFORMATION (continued)

Current Owner

Name ____

Address ____

Phone ( )

Background: Previous Business Operations

Name ____

Type ____

Years of Operation ____

If known, list all previous businesses operating on this property

____

____

____

What hazardous substances/wastes have been associated with the site?

____

____

____

What environmental media is/was/may be contaminated?

☐ Soil ☐ Air ☐ Groundwater ☐ Surface water

Has sampling or other investigation been conducted? ☐ Yes ☐ No

Specify

____

____

If Yes, what hazardous substances have been detected and what were their maximum concentrations?

____

____

____

SECTION 2 SITE INFORMATION (continued)

Are any Federal, State or Local regulatory agencies currently involved with the site? ☐ Yes ☐ No
If Yes, state the involvement, and give contact names and telephone numbers

Agency	Involvement	Contact Name	Phone

What is the future proposed use of the site?

What oversight service is being requested of the Department?

☐ PEA ☐ RI/FS ☐ Removal Action ☐ Remedial Action ☐ RAP ☐ Certification
☐ Other (describe the proposed project)

Is there currently a potential of exposure of the community or workers to hazardous substances at the site?
☐ Yes ☐ No If Yes, explain

SECTION 3 COMMUNITY PROFILE INFORMATION

Describe the site property (include approximate size)

Describe the surrounding land use (including proximity to residential housing, schools, churches, etc.)

Describe the visibility of activities on the site to neighbors

SECTION 3 COMMUNITY PROFILE INFORMATION (continued)

What are the demographics of the community (e.g., socioeconomic level, ethnic composition, specific language considerations, etc.)?

Local Interest

Has there been any media coverage?

Past Public Involvement

Has there been any past public interest in the site as reflected by community meetings, ad hoc committees, workshops, fact sheets, newsletters, etc.?

Key Issues and Concerns

Have any specific concerns/issues been raised by the community regarding past operations or present activities at the site?

Are there any concerns/issues anticipated regarding site activities?

Are there any general environmental concerns/issues in the community relative to neighboring sites?

Key Contacts

Please attach a list of key contacts for this site, including: city manager; city planning department; county environmental health department, local elected officials; and any other community members interested in the site. (Please include addresses and phone numbers.)

SECTION 4 CERTIFICATION

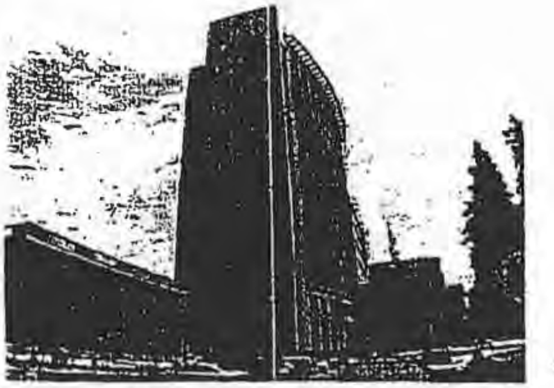
The signatories below are authorized representatives of the Project Proponent and certify that the preceding information is true to the best of their knowledge.

Proponent Representative	Date	Title

In the agreement, DTSC retains its authority to take enforcement action, if, during the investigation or cleanup, it determines that the site presents a serious health threat, and proper and timely action is not otherwise being taken. The agreement also allows the project proponent to terminate the Voluntary Cleanup Program agreement with 30 days written notice if they are not satisfied that it is meeting their needs.

Step 3: Site Activities

Prior to beginning any work, the proponent must have: signed the Voluntary Cleanup Program agreement; made the advance payment; and committed to paying all project costs, including those associated with DTSC's oversight. The project manager will track the project to make sure that DTSC is on schedule and within budget. DTSC will bill its costs quarterly so that large, unexpected balances should not occur.



The new Federal Courthouse, Sacramento: The largest construction project in the city's history benefited from the Voluntary Cleanup Program when cleaning up a railyard site.

Once the proponent and DTSC have entered into a Voluntary Cleanup Program agreement, initial site assessment, site investigation or cleanup activities may begin. The proponent will find that DTSC's staff includes experts in every vital area. The assigned project manager is either a highly qualified Hazardous Substances Scientist or Hazardous Substances Engineer. That project manager has the support of well-trained DTSC toxicologists, geologists, engineers, industrial hygienists, specialists in public participation, and other technical experts.

The project manager may call on any of these specialists to join the team, providing guidance, review, comment and, as necessary, approval of individual documents and other work products. That team will also coordinate with other agencies, as appropriate, and will offer assistance in complying with other laws as needed to complete the project.

Step 4: Certification and Property Restoration

When remediation is complete, DTSC will issue either a site certification of completion or a "No Further Action" letter, depending on the project circumstances. Either means that what was, "The Site," is now property that is ready for redevelopment or other reuse.

To learn more about the Voluntary Cleanup Program, contact the DTSC representative in the Regional office nearest you:

DTSC office locations

North Coast California
Lynn Nakashima / Janet Naito
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721
(510) 540-3839 / (510) 540-3833

Central California
Megan Cambridge
10151 Croydon Way, Suite 3
Sacramento, California 95827
(916) 255-3727

Central California –
Fresno Satellite
Tom Kovac
1515 Tollhouse Road
Clovis, California 93611
(209) 297-3939

Southern California
(Glendale and Cypress)
Rick Jones
1011 Grandview Avenue
Glendale, California 91201
(818) 551-2862

Additional information on the Voluntary Cleanup Program and other DTSC Brownfields initiatives is available on DTSC's internet web page:

http://www.dtsc.ca.gov

State of California - The Resources Agency
GRAY DAVIS, *Governor*

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

Letter 5

October 4, 2001

Mr. Terry Neudorf
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Mr. Neudorf:

Draft Environmental Impact Report
Lower Guadalupe River Flood Control Project
San Jose, Santa Clara County
SCH # 2000042051

Thank you for forwarding the Draft Environmental Impact Report (DEIR) for review. Department of Fish and Game personnel have reviewed the document and we have the following comments.

The DEIR mentions a document referred to as the "Guadalupe River Watershed Planning Study," although it is not clear how this document relates to the current project. Given that this proposal appears to be the final stage of flood improvements for the river, what function will the study fill, and are modifications to the current project likely or possible once it is adopted? 5-1

The Department is in general concurrence with the alternatives analysis, but we would like additional information on the off-stream storage option. The DEIR states that approximately 200 acres of off-stream storage (which could be inundated to a depth of at least 10 feet) would be required to provide the same benefit as the preferred alternative, and that this area is not available. The air photos included in the engineer's report show a number of possible parcels which could be available for this use, and many of these parcels are in public ownership. What process was used to evaluate these parcels and make the final determination that they were unsuitable? 5-2

The maintenance program (chapter 6 of the engineer's report) identifies two herbicides for use for maintenance activities by the District. One of these, Roundup Pro, is noted as not being approved for aquatic use. Why is this herbicide used in channel maintenance activities? If acceptable for use in dry parts of the channel at the times of year when inundation is not expected, this would best be stated in the maintenance program; otherwise the Department recommends this be considered an impact and discussed in the DEIR. 5-3

Conserving California's Wildlife Since 1870

On pages 6-10 of the maintenance plan, it states that: "Selective vegetation removal will occur between mitigation sites of Reach A that are not proposed for riparian planting by the Corps and Caltrans." The Department is concerned that this may have the effect of fragmenting and isolating areas of superior riparian vegetation, thereby diminishing their value. How will selective thinning be done to minimize this impact? 5-4

In a number of places, the engineer's report and the DEIR mention vegetation management that will have the effect of eventually converting areas of riparian forest or scrub to bare or ruderal habitat. Even though large woody vegetation is currently present in these areas, recruitment of replacement vegetation is halted by proposed management practices. It is not entirely clear whether these areas have been included in the total areas of habitat lost to management; if not, they should be added and mitigated for at this stage. 5-5

On pages 6-12 of the maintenance plan, the first paragraph states that the Corps mitigation area is divided into two planting areas, restricted and unrestricted. In the restricted zone, vegetation management is proposed to those elements not part of the mitigation. This seems to describe an unconventional mitigation area, as usually the entire area is considered mitigation. Please describe in more detail why vegetation management is taking place within a mitigation area. 5-6

What is the potential for trapping salmonids in the overflow ponds downstream of the railroad bridge, and what steps will be taken to ensure these fish are not killed when the ponds are pumped out? 5-7

The proposed access/maintenance roads require a substantial amount of initial clearing followed by ongoing maintenance to retain in a passable condition. Has consideration been given to the use of more numerous access points in place of in channel roads? 5-8

More detail appears necessary to justify the proposed mitigation for loss of riparian vegetation. The DEIR identifies the loss of 4.65 acres of riparian vegetation and 104 feet of shaded riverine aquatic (SRA) cover. Mitigation for this loss is based on a system which subdivides the existing vegetation into a number of categories, with separate mitigations proposed for each one. The Department does not recommend the use of this methodology as it is based on artificial conditions (i.e., the managed flood channel) and allows the effectiveness of the 5-9 mitigation to be substantially diminished. The Department's recommendation is that removal of all types of riparian vegetation be at a 3:1 ratio, in a manner most closely duplicating natural conditions. 5-9 cont'd

For example, mitigation for 'xeric riparian forest' is proposed at a 0.5:1 ratio since the replacement would be SRA habitat. This area would be only 15 feet wide, however, introducing a linear habitat which may have significantly more edge area than that which it replaces. While beneficial to aquatic riparian species, this situation may actually be worse for terrestrial or avian wildlife if thicker habitat patches which provide more buffering are removed. 5-10

The proposal to remove Arnudo/wild cane (*Arundo donax*) as mitigation for the loss of an additional 1.91 acres of riparian vegetation is also not recommended. While the Department strongly supports the removal of Arundo in all circumstances, it does not appear this mitigation has been completely thought out. There is no indication of how much Arundo will be removed, little indication of where, no maintenance plan for future regrowth and no mention of revegetation of the cleared areas. We recommend the removal of Arundo and the revegetation of cleared areas at a 3:1 ratio with native riparian species. A maintenance plan should be developed to ensure Arundo does not recolonize cleared and revegetated areas. 5-11

The DEIR acknowledges that southwestern pond turtles (*Clemmys marmorata*) could occur in the project area, but no mitigations are proposed for possible impacts. The Department concurs with this and recommends that mitigations be developed to minimize or eliminate impacts to any turtles which could be present. 5-12

Mitigation W-1 to avoid impacts to nesting birds should be expanded considerably. The mitigation states that preconstruction surveys will be completed and any raptor nests noted and fenced. This proposal is incomplete; any special status bird nests, not just those of raptors, should be fenced. The mitigation should state the buffer built into the fencing, since this has the potential to significantly affect planned work. For example, the Department recommends a 250-foot buffer around raptor nests. The mitigation also proposes removal of raptor and other nests prior to the breeding season. While 5-13 avoiding a direct take, removal of nests will still be an impact to those species exhibiting high levels of site fidelity. This mitigation should be revised to identify all potential impacts and provide mitigations for each. 5-13 cont'd

The DEIR indicates that burrowing owls (*Athene cunicularia*) are historically known from the area and that potential habitat exists in Reach A and near Alviso. Mitigation for potential impacts is not stated for Reach A. Mitigation W-1, which addresses tree nesting birds rather than burrowing owls, is identified as mitigation for any impacts occurring as a result of operations around the Alviso area. The Department recommends that specific burrowing owl mitigations be developed and included in the DEIR. 5-14

The construction area fish management program should be supported by more information. It is unclear why some of the actions which are proposed are included; in particular, the Department recommends the maintenance of cobble lined by-pass channels rather than creating barriers, even temporary ones. This section also serves to illustrate the greatest weakness of the DEIR. While considerable time and analysis has been spent on identifying the project, alternatives and impacts, the biotic mitigations are brief, cursory and sometimes not completely thought through. In the case of the fish management program for example, while it is clear that considerable thought has gone into how various parts of the project will be carried out, none of this information has been included as mitigation. The only mitigation proposed (F-1) for the entire project is to provide passive connections between excavated channels and the low flow channel. The Department recommends a substantial revision of the mitigations proposed for all biological impacts, providing considerably more analysis, detail and justification. 5-15

Given the complexity of the project and the size of the area affected, the Department also recommends that a requirement for at least one on-site biologist be included as mitigation. The biologist should oversee all biological components of the project, including, but not limited to, clearing, revegetation, carry out pre-construction surveys, direct placement of exclusion fencing, establish buffers, monitor water quality and place diversion structures. 5-16

Questions regarding this letter and further coordination on these issues should be directed to Dave Johnston, Environmental Scientist, at (831) 229-1338; or Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584.

Sincerely,

Robert W. Floerke
Regional Manager
Central Coast Region

cc: Office of Planning and Research
State Clearinghouse
Post Office Box 3044
Sacramento, CA 95812-3044

Mr. Erik Schmidt
National Maine Fisheries Service
777 Sonoma Avenue, Room 325
Santa Rosa, CA 95404

Letter 6

California Regional Water Quality Control Board

San Francisco Bay Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov
1515 Clay Street, Suite 1400, Oakland, California 94612
Phone (510) 622-2300 • FAX (510) 622-2460

Gray Davis
Governor

October 12, 2001

Mr. Terry Neudorf
Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

SUBJECT: Comments on the Draft Environmental Impact Report for the Proposed Lower Guadalupe River Flood Control Project

Dear Terry,

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the proposed Lower Guadalupe River Flood Control Project (the Project). San Francisco Bay Regional Water Quality Control Board (Regional Board) staff has reviewed the DEIR and the accompanying Engineer's Report, received August 29, 2001. Based on the review of these reports, Regional Board staff provides the following comments:

Regulatory Approach
The Regional Board is authorized under the Federal Clean Water Act and the state of California's Porter-Cologne Water Quality Control Act, to review and permit projects that will, or have potential to result in impacts to water quality and beneficial uses. The Regional Board seeks opportunities within a project to avoid impacts to the full extent. Where impacts are unavoidable, impact minimization and appropriate mitigation are required. 6-1

Alternatives Not Considered For Implementation
As stated in the May 5, 2000 Lower Guadalupe River Flood Protection Project Notice of Preparation Comment Letter from the Regional Board, "...the Board would like to see further discussion pertaining to ways of combining setback levees, modified bridge crossings, and floodwater storage into a final project design." The Regional Board also stated "reconnecting the Guadalupe River to the Baylands should incorporate a tidal restoration component in addition to flood flow and storage capacity." These alternatives do not appear to have been discussed further in the DEIR. The Regional Board is especially interested in any flood protection alternatives that would incorporate floodwater elevation reduction by setting back levees and increasing storage capacity in the lower reaches of the Guadalupe River Watershed in the existing salt ponds adjacent to Alviso Slough. This approach would create an opportunity to provide flood 6-2

protection and restore the Guadalupe River delta and associated habitats where several of the Cargill salt evaporator ponds now exist. Such an approach would have a built-in mitigation component for impacts that may occur to wetlands. This approach should be discussed further and will require a coordinated effort between regulatory and resource agencies, and the community at large to insure that long-term planning issues are considered. 6-2 cont'd

The Regional Board has concerns over the Floodwalls/Levee Raise Alternative (Proposed Project), the Channel Bank Modification Alternative, Channel Bypass Alternative, and Baylands Mitigation Measure due to direct construction impacts and cumulative maintenance impacts to the Lower Guadalupe River. The District should continue to consider alternatives that were suggested in the NOP comment letter as well as any alternatives that have been eliminated that could reduce impacts to the lower Guadalupe River while providing flood protection. It is understood that the suggested alternatives may not provide adequate flood protection as stand-alone projects, and that combining methods and alternatives may be necessary to meet flood protection and environmental objectives. 6-3

Alternatives/Measures Considered in the DEIR

No Project Alternative
As stated in the NOP comment letter, this alternative will not be discussed, as it will not result in needed flood protection in the lower reaches of the Guadalupe River Watershed.

Floodwalls/Levee Raise Alternative
The major components of this alternative are minor bank modifications at the I-880 bridge approach, raising levees, constructing floodwalls, replacement of the SR 237 eastbound bridge, improvement of maintenance roads and construction of road undercrossings at bridges, installation of 4 vortex rock weirs in reach A, modification of 19 outfalls, and moderate to aggressive management of sediment and vegetation. Impacts include 4.65 acres of riparian area, 48.98 acres of wetlands, 85.56 acres of ruderal area, and 104 linear feet of shaded riverine aquatic (SRA) habitat. Mitigation for riparian and wetland impacts will be developed in a mitigation implementation plan.

Mitigation
Mitigation for 2.74 acres of riparian impacts associated with levee construction would be mitigated by planting riparian vegetation at a 0.5:1 ratio in reach A. The remaining 1.91 acres of riparian impacts associated with sediment removal and vegetation management would be mitigated by removing giant reed under the District's proposed Multi-Year Stream Maintenance Program (SMP) mitigation program. Mitigation for 1.5 acres of non-tidal wetland impacts associated with levee construction would include creation of wetlands at Cargill Pond A4 at a 2:1 ratio. The remaining 6.3 acres of non-tidal wetlands impacts will be included under the SMP

Freshwater Wetland Creation and Stream and Watershed Protection Programs. SMP and construction of wetlands at Cargill Pond A4 wetlands mitigation site at a 1:1 ratio. Riparian and

wetland impacts associated with sediment removal and vegetation management have been included under the SMP. Mitigation for 41.2 acres of tidal freshwater wetlands would involve restoration of tidal marsh at Cargill Pond A4 at a minimum 1:1 mitigation ratio. Of the 41.2 acres, approximately 13.3 acres of wetland impacts were identified under the SMP and will be mitigated as part of the SMP proposal. The remaining 27.9 acres will occur due to levee construction and additional sediment removal and vegetation management.

Concerns
The amounts of impacts to wetlands, riparian vegetation, and ruderal vegetation on the inboard side of levees are of special concern to the Regional Board. In addition, raising levees and floodwalls would contribute to flow containment, which could result in continued excessive sediment deposition in the channel. Ongoing sediment removal and vegetation management impacts would be required to maintain flood capacity. Regional Board staff is also opposed to the proposal to remove woody vegetation for 100 feet up stream and downstream of bridge crossings to create flow transition areas. Stream banks adjacent to bridge crossings are prone to erosion due to increased velocities downstream and backwater erosion upstream. This alternative proposes to avoid impacts to lower Guadalupe River by conducting most of the work on existing levees, however it does not appear to maximize flood protection opportunities while restoring floodplain areas, tidal marsh, and associated habitats. 6-4

The mitigation proposed for this alternative is highly dependant on mitigation alternatives that are unapproved and/or far from constructed. A significant portion of the mitigation, as proposed, would occur at the Pond A4 wetland mitigation site. This 300-acre salt pond is still only in the planning phase as a wetland mitigation site and has not been approved by any of the regulatory agencies. The District does not anticipate restoration to begin until 2007. Further more, it appears that the District is proposing to mitigate freshwater wetlands at what will likely be a salt or brackish marsh, resulting in out-of-kind and off-site mitigation. For these reasons, the Regional Board could not approve the use of Pond A4 for wetland mitigation for the Lower Guadalupe Flood Protection Project. 6-5

Nontidal freshwater marsh and seasonal wetland impacts, as proposed, would be mitigated within the Freshwater Wetland Creation (FWC) and Stream and Watershed Protection (SWP) programs developed for the SMP. Like Pond A4, the FWC sites are still in the early planning phase and these programs still have not been approved by the regulatory agencies. Proposed riparian mitigation would include 0.5:1 mitigation at reach A and giant reed removal under the SMP. Riparian mitigation in reach A may be appropriate but further explanation of the low mitigation ratio is needed. The Regional Board requires that mitigation be in-kind and on-site whenever possible, and that exception are made only when on-site and in-kind alternatives are not possible. 6-6

Giant reed removal as mitigation for riparian impacts will be considered only after the Regional Board is satisfied that in-kind and on-site mitigation is unavailable. For the above reasons, the proposed mitigation is not appropriate. 6-7

Channel Bank Modification Alternative and Mitigation
Major components of this alternative include bank modifications at I-880 bridge, construction of up to 4 vortex rock weirs, construction of floodwalls at upstream and downstream bridge approaches, excavation of the inboard toe of existing levees and construction of vertical or near-vertical channel walls, floodwall extension, improvement of maintenance walls, and moderate to aggressive sediment and vegetation management. Construction related impacts to riparian areas, wetlands, ruderal areas, and SRA habitat would be slightly greater than the Proposed Project while initial sediment removal and vegetation management impacts would be slightly less. Mitigation for this alternative would be similar to that of the Proposed Project.

Concerns
Concerns with this alternative are similar to those of the Proposed Alternative. In addition, the excavation of the inboard toe of the existing levee, and construction of channel walls in reaches D 6-8

through F would appear to have significant impacts on the Lower Guadalupe River. This flood protection method would result in a U-shaped channel with concrete walls, resulting in a highly engineered river instead of attempting to improve Guadalupe River functions and habitat values while providing flood protection within the basin. 6-8 cont'd

Channel Bypass Alternative and Mitigation
Major components of this alternative include increasing levee heights and performing channel excavation in reach A, constructing 2 bypass culverts entirely within the confines of the existing levees, improving maintenance roads, and moderate management of sediment and vegetation. Impacts on riparian areas, SRA and tidal and nontidal freshwater wetlands would be slightly greater than the Proposed Project. Impacts to marsh habitat would be about the same as the Proposed Project. Mitigation for this alternative would be similar to that of the Proposed Project.

Concerns
Concerns with this alternative include the mitigation proposal as described under the Proposed Alternative, in addition to concerns raised in the NOP Comment Letter. 6-9

Baylands Mitigation Measure and Mitigation
Implementation of this measure is proposed in conjunction with the Proposed Project Alternative, Channel Bank Modification Alternative, and Channel Bypass Alternative. Major components include construction of an overflow weir from Alviso Slough to Pond A8W, a levee/floodwall along the west side of the town of Alviso, and installation of pump facilities to evacuate floodwaters from salt ponds adjacent to Alviso Slough. Levee construction would impact 2.45 acres of upland and ruderal vegetation. Vegetation management and maintenance road construction activities would impact 3.95 acres of marsh habitat. Construction of the overflow weir would impact 0.2 acre of aquatic habitat and 0.13 acre of marsh habitat. Mitigation will include a 1:1 mitigation ratio resulting in the creation of 4 acres of wetland habitat at Cargill Pond A4. Ruderal habitat impacts will not be mitigated, as they are considered insignificant.

Concerns
As with the previous alternatives, the mitigation proposal for Pond A4 is insufficient. The Regional Board strongly supports the idea of utilizing the existing salt evaporator ponds for flood storage, especially if it incorporates Guadalupe River delta restoration. This alternative proposes to use select ponds for temporary storage to be evacuated by pump facilities. The Regional Board strongly encourages the District to consider a delta restoration component, and offers to provide staff time to aid in the coordination of this effort. The District should coordinate with the Alameda County Flood Control Agency and their current efforts to study the potential for delta restoration and flood protection benefits for Alameda Creek, described in the "Lower Alameda Creek Levee Reconfiguration Feasibility Study". 6-10

General Concerns
Further explanation is needed for the absence of mitigation for ruderal vegetation impacts. It is understood that the DEIR classifies ruderal vegetation as an upland community but it also states that it is found on riverbanks and levee banks adjacent to the "low flow" channel. The low flow channel, or thalweg, is located within the bankfull channel, which supports riparian vegetation within and on the adjacent banks. The District will need to further clarify the difference between ruderal and riparian vegetation and why ruderal vegetation impacts will not be mitigated. 6-11

This letter is provided within the official CEQA comment period. Additional concerns and comments may arise with further review of the DEIR and future application materials. Regional Board staff will contact the District to discuss future questions and comments for this project. Please contact Paul Amato at (510) 622-2429 or by email at pa@rb2.swrcb.ca.gov to discuss the contents of this letter and to schedule a meeting to address Regional Board concerns with the DEIR for the Lower Guadalupe River Flood Protection Project.

Sincerely,

Paul F. Amato
Environmental Specialist

Cc: Luisa Valiela, USEPA
Robert Smith, USACE - Regulatory Branch
Carl Wilcox, CDF&G
Mark Littlefield, USFWS
Gary Stern, NMFS

Letter 7

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION
P O BOX 23660
OAKLAND, CA 94623-0660
Tel: (510) 286-4444
TDD (510) 286-4454

October 10, 2001

SCL-General
SCL000111A
SCH 2000042051

Mr. Terry Neudorf, Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Dear Mr. Neudorf:

Lower Guadalupe River Project – Draft Environmental Impact Report (DEIR)

This letter is being sent in addition to the California Department of Transportation's (Department) initial response to the review of the above referenced environmental document, which was sent on October 4, 2001. We have identified additional issues that should be addressed in the DEIR. They are the following:

1. The DEIR proposes to build a creek maintenance road under the proposed stem road off-ramp structure and existing bridge at the crossing of U.S. Highway 101 and Guadalupe River. The construction of this maintenance road may conflict with the construction of the Department's U.S. 101 Auxiliary Lane Widening Project, which is expected to begin in spring 2003 and completed by 2004/2005. 7-1
2. The DEIR should indicate what the scour at the Department's bridges are before and after the project. The Santa Clara Valley Water District should also perform and provide an analysis that shows the bridges to be stable under the final conditions. 7-2
3. Raising the water surface elevation may increase pressure flow due to inadequate waterway area and consequently will increase the depth of scour. The Department will need to know what effects raised water surface elevation will have on the bridges. 7-3
4. If there is debris in the channel, will there be impact loading on the superstructure that we will need to be concerned with? 7-4

Since the proposed project is in the early phases, these are the general questions that will need to be answered. We will become more specific with our questions as the project continues forward and during the encroachment permit phase.

Should you require further information or have any questions regarding this letter, please call Maija Cottle, of my staff at (510) 286-5737.

Sincerely,

RANDELL H. IWASAKI
Acting District Director

By Jean CR Finney

JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

c: Katie Shulte Joung (State Clearinghouse)

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, *Governor*

DEPARTMENT OF TRANSPORTATION
P O BOX 23660
OAKLAND, CA 94623-0660
Tel: (510) 286-4444
TDD (510) 286-4454

Letter 8

October 4, 2001

SCL-General
SCL000111
SCH 2000042051

Mr. Terry Neudorf, Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Dear Mr. Neudorf:

Lower Guadalupe River Project – Draft Environmental Impact Report (DEIR)

Thank you for including the California Department of Transportation in the environmental review process for the above referenced project. We have examined the DEIR and have the following comment to submit:

The project proposes to raise the eastbound bridge section of State Route (SR) 237 to match the westbound bridge's existing profile. As the DEIR states on Page 3J-8 the construction activities would have a temporary, but significant impact on traffic due to the high volume of vehicles that use SR 237. Due to the need to perform work or traffic control within the State right-of-way (ROW), an encroachment permit will be required. The permit application for construction activities should include traffic handling plans. To apply for an encroachment permit all applicants are required to submit a completed application with appropriate environmental documentation and five (5) sets of plans (in metric units) which also show State ROW to the following address: 8-1

Mr. Sean Nozzari, District Office Chief
Office of Permits
Department of Transportation, District 04
P. O. Box 23660
Oakland, CA 94623-0660

Should you require further information or have any questions regarding this letter, please call Maija Cottle, of my staff at (510) 286-5737.

Sincerely,

RANDELL H. IWASAKI
Acting District Director

By Maija Cottle for

JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

c: Katie Shulte Joung (State Clearinghouse)

Letter 9

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse

Gray Davis
GOVERNOR

Steve Nissen
DIRECTOR

ACKNOWLEDGEMENT OF RECEIPT

DATE: September 12, 2001

TO: Terry Neudorf
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

RE: Lower Guadalupe River Project
SCH#: 2000042051

This is to acknowledge that the State Clearinghouse has received your environmental document for state review. The review period assigned by the State Clearinghouse is: 9-1

Review Start Date: August 22, 2001
Review End Date: October 5, 2001

We have distributed your document to the following agencies and departments:

California Highway Patrol ?
Caltrans, District 4
Caltrans, Division of Aeronautics
Department of Boating and Waterways
Department of Conservation
Department of Fish and Game, Region 3
Department of Parks and Recreation
Department of Toxic Substances Control
Department of Water Resources
Native American Heritage Commission
Office of Historic Preservation
Regional Water Quality Control Board, Region 2
Resources Agency
State Lands Commission
State Water Resources Control Board, Clean Water Program

The State Clearinghouse will provide a closing letter with any state agency comments to your attention on the date following the close of the review period.

Thank you for your participation in the State Clearinghouse review process.

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse

Gray Davis
GOVERNOR

Steve Nisser
DIRECTOR

October 9, 2001

Terry Neudorf
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Subject: Lower Guadalupe River Project
SCH#: 2000042051

Dear Terry Neudorf:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on October 5, 2001, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

Document Details Report
State Clearinghouse Data Base

SCH# 2000042051
Project Title Lower Guadalupe River Project
Lead Agency Santa Clara Valley Water District

Type EIR Draft EIR

Description The proposed project will allow the District to improve flood protection along the lower Guadalupe River. The project uses the following methods to increase the carrying capacity of the LGR from 14,000 to 17,000 cfs: SR 237 bridge replacement, levee raises, flood walls, bed and bank stabilization measures, and storm drain outfall modifications.

Lead Agency Contact

Name Terry Neudorf
Agency Santa Clara Valley Water District
Phone 408-265-2607 ***Fax***
email
Address 5750 Almaden Expressway
City San Jose ***State*** CA ***Zip*** 95118

Project Location

County Santa Clara
City San Jose
Region
Cross Streets I-880/Union Pacific Railroad Bridge
Parcel No.
Township ***Range*** ***Section*** ***Base*** MDM

Proximity to:

Highways I-880/101/237
Airports San Jose Int'l
Railways UPPR
Waterways Guadalupe River, Hetch Hetchy Aquaduct
Schools
Land Use Public Park/Open Space

Project Issues Agricultural Land; Aesthetic/Visual; Air Quality; Archaeologic-Historic; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Wildlife

Reviewing Agencies Resources Agency; Department of Boating and Waterways; Department of Conservation; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission; State Water Resources Control Board, Division of Water Rights

Date Received 08/22/2001 ***Start of Review*** 08/22/2001 ***End of Review*** 10/05/2001

Note: Blanks in data fields result [illegible] information [illegible]

Letter 10

County of Santa Clara

Roads and Airports Department

101 Skyport Drive
San Jose, California 95110-1302
(408) 573-2400 FAX (408)441-0142
www.countyroads.org

September 27, 2001

Dennis Cheong
Project Manager
Santa Clara Valley Water Distirct
5750 Almaden Expressway
San Jose, CA 95118-3614 –

Subject: Lower Guadalupe River Flood Protection Program

Dear Mr. Cheong:

The August 2001 Draft Environmental Impact Report and Engineer's Report have been reviewed. Our comments are as follows: 10-1

We have no comments.

Thank you for the opportunity to review and comment on this project. Please feel free to call me at 408-573-2462 with any questions.

Sincerely,

Felix Lopez
Project Engineer

cc: RVE, DEC, MA, AKC, RN, file

Board of Supervisors: Donald F. Gage, Blanca Alvarado, Pete McHugh, James T. Beall, Jr., Liz Kniss
County Executive: Richard Wittenberg

Letter 11

County of Santa Clara

Roads and Airports Department

101 Skyport Drive
San Jose, California 95110-1302
(408) 573-2400 FAX (408)441-0142
www.countyroads.org

1850

Ocotber 12, 2001

Dave Von Rueden
Project Manager
CH2MHILL
1737 North First Street Suite 300
San Jose, CA 95112-4524

Subject: Lower Guadalupe River Project from Alviso to Interstate 880

Dear Mr. Von Rueden:

Your September 27, 2001 letter of transmittal along with the Map and General Plan has been reviewed. Our comments are as follows:

1. We have a County Bridge on Montague Expressway; an encroachment permit is required to work on this location. 11-1
2. There may be facilities near or attached to the bridge that are owned by other agencies and companies. Please contact them for their requirements. 11-2
3. The County has a plan to widen Montague Expressway and will have to implement the standard safety treatment to the bridge. As a result, the access driveway on the near side for both directions may need to be closed. Access to the river is available for SCVWD on the far side access driveways on Montague Expressway. Trimble Road and Tasman Drive also provide access to Lower Guadalupe River in the vicinity of Montague Expressway. 11-3

Thank you for the opportunity to review and comment on this project. Please feel free to call me at (408) 573-2462 with any questions.

Sincerely,

Felix V.

Felix Lopez
Project Engineer

cc: RVE, DEC, RJJ and Dennis Cheong

Board of Supervisors: Donald F. Gage, Blanca Alvarado, Pete McHugh, James T. Beall, Jr., Liz Kniss
County Executive: Richard Wittenberg

Letter 12

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement
JOSEPH HORWEDEL, ACTING DIRECTOR

October 12, 2001

Mr. Dennis Cheong, Project Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE LOWER GUADALUPE RIVER FLOOD PROTECTION PROJECT (OA01-10-020)

Dear Mr. Cheong:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report for the Lower Guadalupe River Flood Protection Project located on the Guadalupe River between Interstate 880 and Alviso, and on Alviso Slough from the UPRR bridge to the terminus of Alviso Slough at San Francisco Bay. We have reviewed the Draft EIR and request that the following comments and missing analysis be addressed in the Final EIR.

IMPACTS ON SAN JOSE INTERNATIONAL AIRPORT

The City of San Jose's comment letter of May 12, 2000 on the Notice of Preparation specifically requested information on how flood protection for San Jose International Airport will be affected. The Airport has 14 outfalls along Reach A and B which drain the entire Airport plus additional areas to the west. The Draft EIR contains no analysis or conclusions regarding this impact. The District's Final EIR for its Upper Guadalupe River Project, which also ignored the City's request for analysis of impacts on Airport drainage, stated that discharge from outfalls would be delayed until flows in the river recede. The City is very concerned that the District's plans in Reach A and B would potentially result in significant adverse impacts to the Airport during major storm events, and the Draft EIR is seriously deficient in not analyzing such a major environmental impact issue. 12-1

The Cumulative Impacts section of the Draft EIR references development of a "Pump Station Emergency Operations Plan" that would include restrictions on stormwater discharge during major storm events. Under the California Environmental Quality Act of 1970, as amendment (CEQA), the EIR cannot avoid analyzing flooding impacts by assuming implementation of a 12-2 plan that has not been completed and approved. The City is required under federal safety regulations to prevent airfield flooding and therefore would not agree to allow shut-off of its Airport pump station at a time when it's needed most. 12-2 cont'd

The Draft EIR should identify the site in Reach A designated as mitigation for other projects (including the District's Upper Guadalupe River and Downtown Guadalupe River flood protection projects) to show how they relate to, and are accommodated by, the new improvements proposed by the District. 12-3

Figure 2-2 of the Draft EIR appears to conflict with the text description by showing a raised levee on the east bank of the river in Reach A immediately south of the 101 bridge rather than a floodwall as on the opposite bank. 12-4

The Draft EIR also does not address the expansion of the District's existing easement from the City of San Jose along Reach A downstream of I-880 as indicated in the accompanying Engineer's Report. The District is reminded of the written comments it received from the City on the Upper Guadalupe River Project Draft EIR that an expanded easement area may not be feasible due to conflicts with the Airport's forthcoming Airport Boulevard landscaping (required mitigation for a previous project), an existing PG&E easement, and potential realignment of Airport roadways. 12-5

As mitigation for several planned Airport projects, including the new bridge to the Airport property on the east side of the river and the Automated People Mover (APM) transit system bridge over the river, the City proposes to create additional riparian habitat along the west side of the river adjacent to the planned Airport fuel storage facility. Since the fuel storage facility would be set back a minimum of 100 feet from the top of the west bank, the City would like to grade down a portion of that setback area to create additional area for planting. The City requests a meeting with the District and its consultants for the purpose of discussing this issue in greater detail prior to the District's issuance of the Final EIR for the Lower Guadalupe River Project. 12-6

The figures for Reach A in the Engineers Report indicates that the District plans to create Shaded Riverine Aquatic (SRA) habitat along both sides of the low-flow channel, that includes land owned by the City. The City concurs with this concept except at the location where the planned APM will cross the river. At that location, just downstream of the Skyport Drive bridge, it appears that the SRA plantings would conflict with the APM. This potential conflict should be addressed in the Final EIR. 12-7

IMPACTS ON FUTURE TRAIL ACCESS

In general, the report recognizes the desirability of providing future public access for trails along Reaches A - G of the Lower Guadalupe River Project. The City of San Jose has anticipated development of a regionally serving trail along this segment of the Guadalupe River for many years. This particular segment of the River is included in the City's General Plan 2020, Scenic

Routes and Trails Diagram and the City's *Greenprint, A Twenty-Year Strategic Plan for Parks and Community Facilities and Programs* (*Greenprint*, September 2000). Employees from existing businesses along many portions of river in this area and residents from nearby City of Santa Clara currently use unimproved/unpaved Water District maintenance roads for recreational use (walking and jogging).

The City of San Jose is committed to future planning and development of a multi-use trail along the Lower Guadalupe River after SCVWD flood control improvements are completed. There may also exist opportunities for San Jose to work with the City of Santa Clara on a joint trail project to benefit residents from both cities as well as benefiting other communities in the South Bay area. We expect that any multi-purpose trail within this vicinity would serve both commuter-related needs and recreational needs. Future trail development along the Lower Guadalupe River will provide significant trail connections to the San Francisco Bay Trail, the Alviso community, and the Baylands to the north; recreational trail access for neighborhoods near downtown San Jose and South San Jose along the South Guadalupe River; and important commuter connections from neighborhoods in South/Central San Jose (e.g., the Willow Glen, Gardner, Cambrian and Santa Teresa neighborhoods) to the industrial/business centers in North San Jose's Rincon de los Esteros planning area.

Comments about specific report language follow:

- The report should mention that the project area for this flood control project is part of the City of San Jose's General Plan 2020 Scenic Route and Trails Diagram and is planned for future Class I trail development on top of the east levee. The implementation of the trail project along this reach will need to be closely coordinated with the SCVWD, Army Corp of Engineers and the State Department of Fish & Game. 12-8

- The proposed trail should accommodate both recreational and commuter uses, including bicyclists, walkers, joggers, roller-bladers and similar uses. City multi-use trails should be no less than 12 ft. wide, asphalt pavement material, with a minimum 2 ft. buffer on each side. It is imperative that any trail designs conform to SCVWD maintenance requirements, and allow for the shared use of maintenance equipment and trail use. 12-9

- Designs for channel modifications and SCVWD maintenance roads should provide sufficient vertical clearance (minimum 10 to 12 ft. high) at major under crossings (i.e., Trimble Road, Montague Expressway, Tasman Drive and Route 237), which will accommodate future trail use. Important trail connections allowing user access to these major roadways should also be considered in the design and development of future SCVWD levee reconstruction and channel bank modification projects. 12-10

- Measures should be taken to discourage vandalism to and graffiti along floodwalls adjacent to planned trail areas. Safety issues and aesthetics should also be addressed where floodwalls will be constructed on levees adjacent to future trail alignments. 12-11

- Reference to conflicts with existing and planned recreation facilities on page 3I-8 states that the proposed flood control project along the Lower Guadalupe River "would not result in direct impacts on planned recreational facilities because none are planned in the LRGP area" is incorrect and the language should be changed. Implementation of the flood control project should accommodate future trail development as far as possible and as envisioned by the City's General Plan 2020 and *Greenprint*. 12-12

- Along with the Bay Trail, the future development of the Lower Guadalupe River trail should be added to the list of cumulative projects on page 4-2. 12-13

IMPACTS ON FUTURE GUADALUPE RIVER TRAIL FROM TRIMBLE ROAD TO ROUTE 880

The EIR should address the proposed alignments for the Guadalupe River Trail, in particular, it should emphasize the importance of accommodating a trail system along the river north of Route 880 to extend the Guadalupe River Park trail system to the Airport and into North San Jose. It is the City's desire to have a paved trail constructed as part of the project. The City of San Jose Department of Transportation is willing to participate in the cost. The trail is planned to be on the west bank of the river from Route 880 to the Airport Island Bridge, and on the east bank north of the Airport Island Bridge. 12-14

Proposed Alignment from Trimble Road to Airport Island Bridge:

- Trail on east bank levee
- Underpass at Route 101
- Underpass at Airport Island Bridge
- Connection ramp to Airport Island Bridge from south
- Crossover on Airport Island Bridge to west bank trail and northern Airport bike lane/route

Proposed Alignment from Airport Island Bridge to Route 880:

- Trail on west bank levee
- Underpass at new Green Island Bridge
- Underpass at Airport Parkway Bridge
- Connection ramps to both sides of Airport Parkway Bridge
- Underpass at Skyport Drive Bridge
- Connection ramp to Skyport Drive Bridge from south
- Conform with existing trail at Route 880

Proposed Implementation:

- Construct trail as part of SCVWD project (or Airport project as necessary)
- City Transportation to fund incremental added cost of trail pavement
- City Parks to coordinate SCVWD Joint Use Agreement

IMPACTS ON THE SAN JOSE PORTION OF THE BAY TRAIL:

The EIR should specifically discuss the fact that the City of San Jose is currently preparing a Master Plan for the City's portion of the Bay Trail. This Master Planning process is almost complete. A draft Master Plan was prepared in March, 2000 and a Constraints Analysis analyzing the potential environmental constraints of the proposed alignment was completed in November, 2000. A final Master Plan and Initial Study/Proposed Negative Declaration will be publicly circulated sometime during the fall of 2001. Information regarding this Master Plan was previously forwarded to the Santa Clara Valley Water District. We have attached a copy of the Pre-Final Master Plan to these comments for your reference.

The Master Plan describes the specific alignment of the Bay Trail. There are three reaches (Reaches 7A, 8A and 9) in the Bay Trail Master Plan that could be directly impacted by the Lower Guadalupe River Flood Protection Project (LGRFPP). Reach 7A is located on the eastern Guadalupe Slough levee and travels from the Alviso Marina County Park south to the end of the levee. Reach 7A follows an existing trail on top of the raised levee. Reach 8A starts at Alviso Community Park on First Street and then travels southwest from First Street to connect to the Guadalupe River. An ADA accessible ramp is proposed to connect the trail to the existing river levee where the Guadalupe River trail is proposed. This reach ends at Gold Street. Reach 9 is located on the proposed Legacy Terrace property and would most likely travel around the perimeter of the property directly adjacent to the Guadalupe River and the Cargill Salt Ponds (Pond A8D). Reach 9, Alternative B proposes a pedestrian/bike only bridge from the end of Reach 7A, over the Guadalupe River to connect to Reach 9 at the bottom of the Legacy Terrace parcel.

While the EIR generally references the proposed Bay Trail, there should be specific references to the Pre-Final Bay Trail Master Plan (June 2001) and a discussion in the appropriate places of any potential impacts of the project to the trail. These specific references are addressed below: 12-15

Chapter 2: Proposed Project and Alternatives

Page 2-18. It is not clear whether the proposed depressed maintenance roads in Reach G or the existing maintenance road on top of the levee would be available for use by the Bay Trail. The text should clarify whether trail access will be available. 12-16

Chapter 3A: Hydrologic and Hydraulic Conditions

Page 3A-14. The proposed project will result in increased downstream flooding. The potential impacts of increased downstream flooding on the proposed Bay Trail should be discussed. Reach 9 of the Bay Trail is located directly adjacent to Pond A8D which will receive an increased amount of floodwater under the proposed project. The specific impacts to the Bay Trail should be acknowledged and a determination made on whether the proposed Baylands Mitigation Measure would reduce those impacts. The EIR should state how high flood water will rise around Pond A8D and if the trail will be flooded and for how long. It should be clarified whether the trail will be submerged during major storm events both with and without implementation of the Baylands Mitigation Measure. 12-17

Chapter 3H: Land Use and Planning

Page.3H-10, 1st paragraph. The EIR should discuss the Scenic Routes and Trails Diagram, which is part of the San Jose 2020 General Plan. The Diagram shows a trail along the entire length of the Guadalupe River corridor to the mouth of the river in Alviso. The Bay Trail Reach 8A coincides with the lower portion of the designated route. 12-18

Page 3H-13. There should be a section under the San Francisco Bay Trail Plan that describes the City of San Jose's Bay Trail Master Plan. 12-19

Page 3H-15, 3rd paragraph. The plans and policy consistency analysis should discuss the consistency of the proposed project with the City of San Jose's Bay Trail Master Plan. The EIR should clarify whether the depressed maintenance roads in Reach G will be used for trails or the top of the levee. The EIR should address impacts from the 1.22 meter floodwall on the trail located on the levee. The EIR should also address potential safety and aesthetic impacts to trail users. 12-20

Page 3H-19, 2nd paragraph. The EIR should address impacts of the 1 meter channel wall on the trail located on the levee and identify potential safety and aesthetic impacts to trail users. 12-21

Page 3H-20. The EIR should address impacts of the Baylands Mitigation Measure on the Bay Trail. This mitigation measure includes raising the levee along Alviso Slough, which will directly affect Reach 7A because the trail is located on top of the levee. The EIR should clarify whether raising the levee will allow for adequate width of the trail. The Bay Trail is proposed as a 12 foot wide paved trail with 2 foot shoulders. Therefore a minimum width of 16 feet is necessary on top of the levees. An additional mitigation measure should be included that the levees should be designed to accommodate the Bay Trail. 12-22

This Baylands Mitigation Measure will also affect the Alviso Marina County Park which is an integral part of the Bay Trail Master Plan. The park will be used as a staging area for the Bay Trail and a new boardwalk trail will be constructed by Santa Clara County within the park to cross over the bulrush habitat of the former marina basin as part of Alviso Marina County Park Master Plan improvements. The boardwalk trail will connect to the Bay Trail in Reach 7A. The EIR states that the construction of the levee or floodwall adjacent to the Alviso Marina County Park could create changes in the plans and operation of this facility. The EIR should discuss how these changes could also affect the Bay Trail. 12-23

The impacts of the Baylands Mitigation Measure on Reach 9 of the Bay Trail should also be discussed. As described above, Reach 9 of the Bay Trail is located directly adjacent to Pond A8D which will receive an increased amount of floodwater under the proposed project. The Baylands Mitigation Measure includes pumping of the salt ponds. The EIR should clarify whether this mitigation measure will reduce the potential flooding impacts to Reach 9. 12-24

Recreation, Public Access and Visual Resources

Page 3I-5, Reach G. This section should specifically reference the City of San Jose's Bay Trail Master Plan. It should state that the Bay Trail is proposed along the Guadalupe River in Reaches 7A, 8A and 9 as described above. 12-25

Page 3I-8, 4th paragraph. The EIR states that "The Proposed Project would not result in direct impacts on planned recreational facilities because none are proposed in the LGRP area..." This should be changed to include a reference to the proposed Bay Trail and a discussion of any impacts to the Bay Trail as discussed above. 12-26

Page 3I-9, 2nd paragraph. There should be a discussion regarding the timing of construction of the proposed project and the construction of the Bay Trail. For example, the Bay Trail should not be paved prior to any construction on the levees that may require removal of the pavement. The construction of both projects should be closely coordinated by the SCVWD and the City of San Jose. 12-27

Page 3I-9, 3rd paragraph. The visual impacts of the proposed project to trail users should be discussed and impacts from the 1.22 meter floodwall on trail users should be addressed. 12-28

Page 3I-11, 2nd paragraph. The EIR should address the impacts resulting from the construction of backwalls on access to the Bay Trail. 12-29

Page 3I-12, 2nd paragraph. The visual impacts of the channel bank modification to trail users should be discussed. The EIR should also address the impact the 1 meter channel wall will have on trail users. The impacts from other channel modifications associated with this alternative including replacing a sloping levee with near-vertical walls, aprons 12-30 and backwalls should also be addressed. All of these modifications will result in a dramatic visual change and will affect the trail user's experience.

Cumulative Impacts

Page 4-2. The City of San Jose's portion of the Bay Trail should be included in the list of cumulative projects analyzed in the EIR. 12-31

IMPACTS FROM FLOODING:

Channel Capacity

The Draft EIR does not identify the actual needed capacity of the river channel to provide the 100-year flood protection. The 17,000 cfs design capacity assumes no impact to the peak flow from the watershed downstream of the confluence of Los Gatos Creek and Guadalupe River. This assumption is unrealistic and thus in our opinion the channel is not designed for the 100-year flood protection. 12-32

Residual Flooding

The Draft EIR does not address the impact of residual flooding to the local drainage basin. It is not acceptable to cause property damage from residual flooding. A study and routing analysis of residual flooding must be performed to determine the impact during the peak flow. 12-33

Pump Stations Operation

The Draft EIR assumes that the river 100-year flood protection is achievable by shutting pump stations in the Lower Guadalupe River reaches. Shutting pump stations will result in massive flooding in streets and private properties. This is not acceptable to the City of San Jose. 12-34

We believe that the 100-year design capacity should take into account the effect of the pump stations (current and future planned) flows including all outfalls that discharge into Lower Guadalupe River.

Emergency Response

The Draft EIR requires that the District sign an agreement with the City of San Jose agreeing to shut off pump stations at the beginning of the freeboard infringement, which is approximately 3.5 feet from the top of levee. This is not acceptable since it is not reasonable to flood local streets (by shutting pump stations) when there is no eminent threat of levee overtopping or breach. 12-35

The City of San Jose's Office of Emergency Services (OES) is willing to work with the District's OES to come up with an "Action Plan" to limit the operation of pump stations during eminent flooding threat due to levee overtopping or breach. However, this should be done in the event of flood events greater than the ***realistic 100-year design capacity***. We do not believe that the current design capacity (17,000 CFS) is a realistic 100-year design capacity for Lower Guadalupe River. 12-35 cont'd

Outfalls

The effect of the proposed raised levees on existing gravity outfalls is not addressed in the Draft EIR. The City of San Jose is concerned that the increased levee elevation may result in the need to construct additional pump stations along the Lower Guadalupe River reaches. The report must address the impact of the flood control project on all existing drainage facilities and identify mitigation measures. 12-36

Alviso

The draft EIR does not address 100-year river improvement just downstream of the Alviso area. The reliance of the proposed design to store floodwater in the salt ponds during the peak flows is not acceptable. The salt pond levees are not engineered levees and thus may fail in the event of excess storage. If the salt pond levees fail, the impact to Alviso may be significant. The design should provide engineered channel protection all the way to the San Francisco Bay. The current design does not. 12-37

Thank you again for the opportunity to review and comment on the Draft EIR for this project. We look forward to reviewing the District's response to our comments and the Final EIR. If you have any questions regarding these comments, please contact me at (408) 277-4576.

Sincerely,

Janis Moore
Planner II

Attachment

C: Cary Greene
Hans Larsen
Judy Salvano
Taher Basma

OA01-10-020 DEIR Lower Guad River.doc/JAM

Section III - Trail Plan
Spur Route – Reach 7A
Guadalupe Slough Levee

Setting

The entire length of Reach 7A runs on a raised levee parallel to Guadalupe Slough. The Slough is the only navigable water from the Community of Alviso into the San Francisco Bay. As such, this channel is highly valued, both as corridor for waterfowl and as access for small craft for recreational boating and fishing. Along the edges of the channel is tule marshland, which has the potential to support several sensitive species. The levee also forms the western boundary of the Historic District of Alviso. The Alviso Historic District (CA-SCI-339H) includes the Port of Alviso and Bayside Cannery districts and other historic era buildings and sites. Adjacent to the levee trail is the historic Alviso Yacht Club.

Description of Route

This reach will provide a connection between the Alviso Marina County Park to the north, the historic district of Alviso to the east, and, potentially a proposed alternative connection to Reach 9 to the south. One of three alternative routes for Reach 9 would provide a connection from the Legacy property to Reach 7A via a new pedestrian/bicycle only bridge crossing over the Guadalupe Slough. The bridge would be located approximately 15 to 30 feet west of the Union Pacific Railroad Bridge. Without this connection this reach will be retained as a Spur Trail in the overall Bay Trail network.

Trail Type

Reach 7A is an existing Class I, shared use, raised levee trail. This reach is open to the public for recreational uses. The levee appears to be engineered and has a wide crest. The levee crest is approximately 25 feet above the streets of Alviso and there is an existing access to the levee from the Alviso Marina County Park. There are also stairs and ramps that provide access from the local city streets to the levee near the historic Alviso Yacht Club. The trail surface is compacted aggregate base rock.

Summary of Design Recommendations and Required Actions

- Trail Access Improvements. Sign the existing levee trail as part of the Bay Trail. No improvements to the existing trail surface are recommended for this reach. Reconfigure the bollards where the levee connects to the Alviso Marina County Park parking lot to provide an ADA accessible connection to the levee. In the future, the *Alviso Marina County Park Master Plan* (October 1997) recommends improvements to the existing staging area

Key Route Elements

- .4 miles long
- Recreation Route

Trail Type

- Class I Raised Levee Trail

Land Uses & Property

Owners

- Santa Clara Valley Water District
- Santa Clara County Parks (public access easement)

Existing Land Uses

- Levee - Flood Control Service Road
- Public Recreation

Habitat Type/Sensitivity

- Tule marsh – sensitivity minimal, trail is elevated above habitat

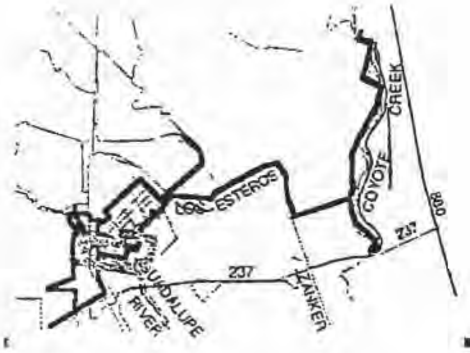
Points of Interest

Destinations/Points of Interest

- Historic District - retail
- Alviso Marina County Park
- Alviso Yacht Club

Interpretive Opportunities

- Bay views & opportunities to learn about the SF Bay
- Historic Opportunities



Section III - Trail Plan
Spur Route – Reach 8A
Guadalupe River Connection

Setting
For approximately half the distance, this route will be located in an area that is now comprised of mixed residential, industrial and private recreation associated with the golf driving range. Future use may include a mix of industrial, commercial and recreational uses wherein "river-oriented" development will be encouraged according to the *Alviso Master Plan: A Specific Plan for the Alviso Community (December 1998)*. The remainder of the route will be located on a raised levee for the Guadalupe River. This river levee will eventually become part of the Guadalupe River Trail.

The Guadalupe River in the location of the Gold Street Bridge contains tule marsh and provides potential habitat for several sensitive species.

Description of Route
This reach will begin where the trail exits the Alviso Community Park onto First Street. The specific location of the crossing will be dependent future development of the west side of First Street and access to that development from First Street.

Once across the First Street intersection, the trail will be routed southwest across private lands on public easements. Once the trail reaches the river it will ramp up to an existing levee and continue west to Gold Street where it will connect with Reach 9. The specific alignment through private properties will depend on future development patterns along the proposed route. The specific configuration of the connection to Reach 9 will depend on the final alternative route chosen for Reach 9 (refer to Reach 9 description for a discussion on the alternatives). To proceed south from the levee trail users will need to continue north on Gold Street to Moffat Street. At Moffat Street southbound travelers will be able to cross Gold Street at an existing intersection to connect to Reach 9. Northbound travelers will continue on Gold Street to connect with Reach 7 or Reach 8 at First Street/Taylor Street.

Trail Type
Reach 8A will be a Class I, shared use trail. This reach is to be a paved trail designed for year round use along its entire length. Between First Street and the Guadalupe River Levee, the trail will be developed at grade or on a raised bed if there is an indication of ponding water along the specific route. Once the trail reaches the Guadalupe River, a ramp will be developed to provide access to the raised river levee.

Key Components of Route
- .5 miles long
- Recreation Route
- Connects to Guadalupe River Trail

Trail Type
- Class I Trail Adjacent to Future Development
- Levee Trail

Land Uses & Property Owners
- Private lands
- SCVWD

Existing Land Uses
- Mixed private commercial, recreation, industrial
- Flood Protection

Habitat Type/Sensitivity
- Tule marsh – sensitivity minimal, trail is elevated above habitat

Habitat Type/Sensitivity Con't
- Developed land/City streets/ Ornamental landscaping – sensitivity low

Points of Interest
Destinations/Points of Interest
- Guadalupe River
- Alviso Park & Community Center
- Alviso Library
- George Mayne School

raising the levee two feet, or 2) installing a flood wall (approximately 1 meter high) on the inboard side of the levee. Both alternatives will accommodate maintenance vehicles and should, therefore, retain adequate width at the crest of the levee for the trail. To ensure that the recreation value of this levee is not lost as future flood control alternatives are proposed, City staff should continue to coordinate with the Santa Clara Valley Water District staff involved in the Lower Guadalupe River Project improvements for Guadalupe River levee.

- Gold Street Bridge Connection. At Gold Street there is an existing SCVWD maintenance vehicle access point. This access is currently secured to prevent unauthorized access. In the future, this entry point will need to be modified to accommodate the Bay Trail. At that time, bollards and controlled access gates should be placed at the transition zones between the public right-of-ways and the Guadalupe River levee to prevent unauthorized motor vehicle use of the trail. (See *Section IV - Design Guidelines – Figure 13 Trail Gates and Entry Treatments* for prototype designs). Options for exploring the development of an undercrossing to provide a direct connection to Reach 9 for southbound travelers will be dependent on the design of a new Gold Street Bridge, which may be designed as a separate project in the future.

- Security. As new development occurs, security/educational features should be developed to separate trail uses from business uses. Such measures could include fencing and signing. Additionally bollards should be provided at the entry to the Guadalupe River levee to prevent unauthorized vehicles from accessing the river levee.

- "Front Yard Design". Every effort should be made to design future developments so that the land adjacent to the trail is developed using a "front yard" design approach to the trail corridor. This can be accomplished by encouraging the placement of landscaping adjacent to the trail and requiring visual screening where auto parking, storage, or waste disposal areas are located adjacent to the trail. Employers should be encouraged to provide pedestrian and bicycle access from the development onto the trail and to install secure, long-term bike storage to encourage use of the trail by their employees.

Spine Route Reach 9 – Gold St. to San Tomas Aquino Creek via Legacy Terrace

The Gold Street Connector Road parallels Highway 237. It crosses the existing Union Pacific Railroad tracks near the Gold Street intersection. There are two signalized crossings, one at Gold Street and a second at Great America Parkway. The Gold Street Connector Road can be noisy and potentially dangerous due to the volume of traffic accessing Highway 237. This situation may worsen, as Caltrans is proposing to modify the ramps onto and off of Highway 237 to accommodate higher traffic volumes in this area. Alternative C has no visual connection to the Bay. A wetland area is located at the intersection of Gold Street and the Gold Street Connector Road, which has the potential to support several sensitive species.

Description of Route

This reach has several complex land use constraints that are beyond the scope of this project. These constraints have the have the potential to limit trail continuity along this reach. Development of all of the alternatives proposed for this reach will require resolution of these constraints. These include: 1) the current vehicular bridge on Gold Street, which does not meet current City traffic standards; 2) the existing at-grade crossing of the Union Pacific Railroad tracks within the Legacy Development emergency access road, which is currently not open to the public; 3) potential changes to the existing SCVWD the Guadalupe River levee as part of the Lower Guadalupe River Project, which could limit opportunities to span the Guadalupe Slough; and 4) proposed improvements to the Highway 237 access ramps along the Gold Street Connector Road currently under study by Caltrans, which could impact the Gold Street Connector Road. Resolution of these complex land uses issues will require on going coordination and monitoring of future developments along this reach by the City. It will also require multi-agency participation in development of design solutions that will accommodate the Bay Trail in the future.

To facilitate Bay Trail discussions with agencies that have the potential to incorporate the Bay Trail into the scope of their projects, three alternatives have been developed. Each of these alternative routes will provide a connection between Reaches 7, 8 and 8A to the existing section of the Bay Trail, which terminates at Great America Parkway. These alternatives are described as the "*Preferred Alternative-Legacy Access Road*", "*Alternative B- Guadalupe Slough Pedestrian/Bicycle Bridge" and "Alternative C-Gold Street.*" While the trail routes have been identified, as Preferred and Alternatives B and C, all of these routes could be developed, thereby enriching the Bay Trail experience for trail users. Therefore, none of the alternatives should be considered as short-term. Rather, all three alternatives should be looked at as potential options that should be pursued as opportunities arise in the future.

Interpretive Opportunities

- The levee trail adjacent to wetlands & riparian areas will offer excellent opportunities to view waterfowl
- Panoramic views may provide opportunities for describing the S. F Bay

Future Actions

Agreements/Easements

- Private land easements needed with Legacy Terrace Development to provide a connection between the Guadalupe River and the San Tomas Aquino Creek Bridge (Pref. Alt. & Alt. B)
- Use agreement needed with SCVWD to access their leve (Pref. Alt. & Alt. B)
- Use agreement & construction

represent any new use of an existing rail crossing because bicyclists and pedestrians currently are permitted to use this road. The proposed trail and bike lane improvements would represent a safer road design. Once over the railroad tracks, the trail would continue on the Gold Street Connector Road to Great America Parkway.

All Alternatives – Connection to Existing Westerly Connection with the Bay Trail and future San Tomas Aquino Creek Trail. At the southwest boundary of the Legacy property and Great America Parkway, the trail will connect to the existing Bay Trail. This existing segment of the Bay Trail extends into Sunnyvale and will connect to the future San Tomas Aquino Creek Trail at the San Tomas Aquino Creek Bridge.

Trail Type

Reach 9 will be primarily Class I shared use trail, though the portions of the trail located along Gold Street will be developed with Class II/III bike facilities and sidewalks.

Preferred Alternative-Legacy Access Road.

Between Taylor/First Street and Moffat Street, the trail will be developed with Class II bike lanes and sidewalks. The bike lanes will be designated by lane and road edge striping.

At Moffat Street, the Bay Trail will transition into a Class I shared use trail from the Class II bike lanes and sidewalk along Gold Street. The Class I Trail will be 12 feet wide. Where the trail parallels Gold Street and the proposed public roadway/emergency access road, a landscaped buffer a minimum of 5 feet wide should be located between the roadway and the trail.

Alternative B- Guadalupe Slough Pedestrian/Bicycle Bridge

This alternative calls for a new bridge, which would be designed for use by pedestrians and bicyclists. The bridge would be 10 feet wide (minimum). Bridge approaches would be designed to be ADA compliant. The bridge would connect to a SCVWD levee to the north (Reach 7A). The southerly approach would be from the Legacy levee access road west of the Union Pacific Railroad tracks. The specific design of the bridge, bridge abutments, and bridge approaches would be developed as a separate project.

Preferred Alternative and Alternative B. West of the railroad crossing, the Class I shared use trail will be located on the north side of the Legacy Terrace Development on an existing levee that is comprised of dredged Bay spoils. This segment will not be paved because engineered fill will not bond with these existing soils.

information on railroad crossings refer to the *Design Guidelines- Figure 12 At-grade Railroad Crossings.*

- Preferred Alternative – Seasonal Closures. There is evidence to suggest that portions of the Legacy levees are periodically covered with water and subject to accelerated erosion. The SCVWD engineered levee located adjacent to San Tomas Aquino Creek may also impassible for portions of the year because it too is subject to flooding near the junction of the existing Bay Trail Bridge that crosses San Tomas Aquino Creek. Because of the nature of the soils and the potential for periodic flooding, temporary closures may be required when trails become impassible during the winter rains or if additional dredge spoils are placed on the Legacy levees.

  In addition, these levees also have the potential to be nesting habitat for the snowy plover and other shorebirds. As some of these shorebirds can be sensitive to human intrusion and could likely either abandon their nests or stay away long enough to result in egg mortality, this trail reach may need to be monitored annually by an agency or bird observatory group. The designated groups (observatory group to be determined during project implementation) will identify any nest sites and determine whether seasonal trail closure is necessary.

- Preferred Alternative and Alternative B - "Front Yard Design". Orient future development uses within the area zoned "Riverfront" to create a "front yard" design approach to the trail corridor. Encourage the placement of landscaping, outdoor seating and bike storage adjacent to the trail and provide secured short-term (retail) and long-term (office) bike storage to encourage use of the trail. For more discussion, also refer to *Section III- Policies and Permits and Section IV - Design Guidelines - Figure 5 Trail Use Adjacent to Development.*

- Preferred Alternative and Alternative C - Gold Street Bridge. To gain the necessary width to provide for motorized vehicles, as well as bicycle and pedestrian access across the Guadalupe River on Gold Street, a new vehicular bridge will be required. Construction drawings for the existing bridge indicate that the City right-of-way extends 7.5 feet east and west of the existing bridge. Any bridge width developed in excess of that, as proposed in these master plan design guidelines, would require acquisition of right-of-way from, or a use agreement with, the Santa Clara Valley Water District.

between the street surface and the bridge approach, 2) 36" of unobstructed width on the approaches and across the bridge and 3) a maximum gradient of 8.33%.

Pedestrians traveling south and west from the Gold Street Bridge to Great America Parkway, will travel on existing sidewalks on the east side of Gold Street and on the south side of the Gold Street Connector Road. Pedestrians traveling northbound from the Gold Street Bridge on Gold Street will also remain on the east side of Gold Street to the junction of Reaches 7 and 8 at Taylor/First Street.

As part of the interim plan, the roadway should be designated as a Class III bike route across the bridge. This Class III designation should continue north into the "village of Alviso" and south to the Gold Street Connector Road.

- Coordination with the Lower Guadalupe River Project. As part of the Lower Guadalupe River Project, the Santa Clara Valley Water District is currently studying alternatives for flood protection that may include raising the levee one to two feet. Design and construction of a bridge (new pedestrian/bicycle bridge – Alternative B or a new vehicular bridge with trail accommodations – Preferred Alternative or Alternative C) across the Guadalupe Slough will require coordination with the Santa Clara Valley Water District staff involved in the Lower Guadalupe River Project.

- Preferred Alternative and Alternative C - Connection to Bus Service. There is bus service (VTA bus route 58) along Gold Street. This trail segment is not expected to disrupt this service, but should benefit from it as it will provide multi-modal opportunities to access the Bay Trail. The Class II bike lane striping will overlap with the bus stop zones. Therefore, at the near side and far side bus stop locations, bike lane striping should not be delineated within the red-curbed bus zones. Pavement markings should follow "Bike lanes at Bus Stops, Figure 5 of the VTA guidelines (Refer to *Appendix E – Excerpts from Santa Clara Valley Transportation Authority, Bicycle Technical Guidelines*).

In keeping with the recommendations of the *Alviso Master Plan: A Specific Plan for the Alviso Community (December 1998)*, additional amenities should be considered at the bus stops. Such amenities may include benches, raised planters, trellises, trash receptacles and information kiosks where additional width can place the trail within this Gold Street Connector Road. Additionally, the wetlands beginning at the corner of Gold Street and continuing west along this frontage road will further constrain the lands that will be available for locating the trail within the road right-of-way. The City should monitor proposed improvements to Highway 237 that could affect the alignment of the trail on the Gold Street Connector Road. The City should coordinate with Caltrans on an ongoing basis to take advantage of future opportunities to provide a trail connection between the existing segment of the Bay Trail at San Tomas Aquino Creek and Gold Street via the Gold Street Connector Road.

Letter 13

THE CITY OF SANTA CLARA
CALIFORNIA

ENGINEERING DEPARTMENT
CITY HALL
1500 WARBURTON AVE.
SANTA CLARA, CA 95050
(408) 615-3000
FAX (408) 985-7936

October 11, 2001

Dennis Cheong, Project Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Re: Lower Guadalupe River Flood Protection Project
- **Draft Environmental Impact Report**
- **Engineer's Report**

Dear Mr. Cheong:

Thank you for the opportunity to review the above referenced documents. After reviewing the documents, I have the following concerns, comments, and questions:

DRAFT ENVIRONMENTAL IMPACT REPORT

As was stated in my response letter dated July 28, 2000 (copy attached) related to the Downtown Guadalupe River Project environmental document, one of the City of Santa Clara's (City) main concern is the increased susceptibility for flooding due to the increase flows coming from upstream. It is crucial for the City to have the improvements to the Lower Guadalupe River Project (LGRP) designed such that the river will convey the 100-year flow to the San Francisco Bay (not only to the UPRR) and maintain the required FEMA freeboard on levees and at river crossings. The response to my letter dated July 28, 2000 (copy attached) states that the Guadalupe River Project with the Bypass System Alternative will not be made operational until the LGRP is completed. However, the response failed to address the 100-year flow capacity of the LGRP. 13-1

The Draft EIR for the LGRP does **NOT** mention that the level of protection the river will provide with the proposed improvements is for the 100-year flow. The Draft EIR refers to the level of protection as the "design floodflow event" and defines that to be 17,000 cfs, the same capacity of the Lower Guadalupe River in 1983. The 17,000 cfs is the calculated 100-year flow at the confluence of the Guadalupe River and the Los Gatos Creek. The 17,000 cfs is the 100-year flow obtained from 144 square miles out of the total 160 square miles of drainage area for the Guadalupe River. Ten percent (16 square miles) of the total drainage has not been included in the drainage analysis. (The total area within the City limits is approximately 18 square miles. This is only 2 square miles less than the area not included in the Guadalupe River drainage analysis). The appropriate drainage basin area for the Guadalupe River must be taken into account in the engineering analysis to calculate the 100-year flow in the river at any specific point. The 17,000 cfs is valid if and only if the Lexington Reservoir is approximately half full or 10,000 af below the maximum storage capacity at the spillway. What is the probability that the Lexington Reservoir will be half full when we experience the 100-year event? The 17,000 cfs is assumed to pass through to the San Francisco Bay without taking into account the effects of tidal flows, the eighteen (18) pump stations, and the additional outfalls downstream of the Guadalupe River/Los Gatos Creek confluence. The proper engineering analysis must be performed to determine the 100-year flow in the LGRP, taking into account all sources (pump stations, outfalls, and tidal effects) contributing to the flow in the river all the way down to the San Francisco Bay. 13-1 cont'd

It is important to note that the City designs all its pump stations to convey the 100-year flows. The Nelo-Victor Pump Station, one of the pump stations that discharges into the Guadalupe River, was found not to have the 100-year flow pumping capacity. The Nelo-Victor Pump Station Upgrade Project is currently under design (30% complete). Once the upgrade is completed, the pump station capacity at maximum operating point will increase from 78 cfs to 172 cfs. The Laurelwood Pump Station, designed and built at the same time as the Nelo-Victor Pump Station, also discharges into the Guadalupe River, and may also need to be upgraded to convey the 100-year flow, depending on the results of its tributary area drainage analysis (future study).

13-2

An agreement, such as the SCVW's Local Cooperative Agreement with the Army Corps of Engineers (signed in March of 1992), does NOT justify the proposed 17,000 cfs capacity in the Lower Guadalupe River. Again, the proper engineering analysis must be performed to determine the 100-year flow in the LGRP.

Simply adding each of the eighteen (18) pump station capacities to the 17,000 cfs flow to obtain the 100-year flow in the river may not be the same result that can be obtained through a more involved engineering analysis. What is the probability that the 17,000 cfs peak flow will coincide with the peak flow of each of the eighteen (18) pump stations and the peak flow of the upstream most pump station coincide with the peak flow of each of the downstream pump stations? The probability of the above scenario may be less than the occurrence of the 100-year flow, the flow we are protecting against.

Figure 2-6 shows Area 10 as a Potential Staging Area. This area can not be used as a staging area because the area is being used as a mitigation site for replacement wetlands (Ulistac Natural Area). 13-3

At the top of page 3A-9, the 11,000 cfs flow is noted as having a 25-year recurrence interval, based on Figure 3-3. However, Figure 3-3 shows a flow of 11,000 cfs as having approximately a 35-year recurrence interval. Also, Figures 3-3 shows that the 100-year flow to be approximately 17,600 cfs not 17,000 cfs. 13-4

In Figures 3-8, 3-9, and 3-12, the street name noted as "Triangle Road" must be changed to read "Trimble Road". 13-5

The proposed Pump Station Emergency Operation Plan must be treated as a totally separate issue and must **NOT** be used as a mitigation measure for the LGRP just because the proposed LGRP design does not take into account the contributing flows from all eighteen (18) pump stations. Again, the LGRP must be designed to convey the 100-year flow, taking into account all pump stations, outfalls, tidal effects, and maintain the required FEMA freeboard on levees and at river crossings. The Pump Station Emergency Operation Plan negotiations shall not be part of the EIR certification process for the LGRP. 13-6

The proposed Pump Station Emergency Operation Plan is not a construction project and shall not be included in Chapter 4, Cumulative Impacts, under "Projects Addressed in the Cumulative Impact Analysis". Again, the proposed Pump Station Emergency Operation Plan is a totally separate issue and shall not be part of the LGRP Draft EIR. There is no mitigation measure that can be implemented to mitigate the exclusion of the eighteen (18) pump stations from the engineering analysis to calculate the 100-year flow in the river.

The following projects and their descriptions must be added to the list of "Projects Addressed in the Cumulative Impact Analysis" (page 4-2):

- Wetland Mitigation Project at Fairway Glen Site
- Nelo-Victor Pump Station Upgrade Project 13-7

The descriptions of the following three new projects are missing in the Draft EIR:

- Los Capitancillos Freshwater Wetland Mitigation Site Development Project
- Santa Clara Valley Water District Instream Recharge Program
- City of San Jose Riparian Corridor Policy Study

Under the description for the Rivermark Project (page 4-5), it is stated that Sun Microsystems purchased the land from the State of California. This is not my understanding. Please confirm the information by contacting Scott Hilk of Centrex Homes at (925) 356-7248. 13-8

There are eighteen (18) pump stations not seventeen (17) as stated in the second paragraph of page 4-12. 13-9

In 1991, the SCVWD certified that the Lower Guadalupe River had the capacity to safely convey the 100-year design floodflow. The SCVWD must again certify that the Lower Guadalupe River will have the capacity to safely convey the 100-year design floodflow when the LGRP is completed. 13-10

ENGINEERS' REPORT

In the Glossary of Terms Section of the Engineer's Report (page XV), the definition for the 100-year flood is given as "A flood that has a 1% chance of equaling or exceeding 17,000 cubic feet per second in any given year." The definition must make it clear that the 17,000 cfs occurs at the confluence of the Guadalupe River and the Los Gatos Creek which does not take into account all the contributing sources (outfalls and pump stations) downstream of said confluence. 13-11

The Engineer's Report (pages 1-8 and 2-1) states that the total drainage area for the Guadalupe River is 170 square miles. However, the Draft EIR (pages 5-2) states that it is 160 square miles. Which is correct? 13-12

The following are comments related to Table 1-1 of the Engineer's Report under the "Proposed Flood Protection Measures" Column: 13-13

1. Reach A: add "levee raising"
2. Reaches B and C: remove the word "floodwalls"
3. Reach G: remove the words "levee raising"

Again, thank you for the opportunity to review the referenced documents. If you have any questions or need more information regarding the above concerns, comments, or questions, please call me at (408) 615-3011.

Sincerely,

Gustavo Gomez
Principal Engineer – Design Division

GG:arh

cc: Steve Yoshino, Director of Public Works/City Engineer
Robin Saunders, Director of Water and Sewer Utility
Kevin Riley, Principal Planner – Planning Division

Letter 14

THE CITY OF SANTA CLARA
CALIFORNIA

ENGINEERING DEPARTMENT
CITY HALL
1500 WARBURTON AVE.
SANTA CLARA, CA 95050
(408) 615-3000
FAX (408) 985-7936

July 28, 2000

Ms. Nina Bicknese
Biological Services Environmental Manager
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

Re: Guadalupe River Project—Draft General Re-Evaluation Report/Environmental Impact Report and Supplemental Environmental Impact Statement for Proposed Modifications

Dear Ms. Bicknese:

Thank you for the opportunity to review the above referenced documents.

One of the City's main concerns is the increased susceptibility for flooding due to the Guadalupe River Project improvements. It is crucial for the City of Santa Clara to have the improvements to the Lower Guadalupe River Project completed prior to or concurrently with the Guadalupe River Project. The 100-year flood protection provided by the Guadalupe River must extend to the San Francisco Bay. 14-1

If you have any questions or need more information regarding this matter, please call me at (408) 615-3011.

Sincerely,

Gustavo Gomez

Gustavo Gomez
Principal Engineer—Design Division

cc: Bruce C. Augason
Kevin Riley

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THE CITY OF SANTA CLARA CALIFORNIA, ENGINEERING DEPARTMENT, GUSTAVO GOMEZ (JULY 28, 2000)

Response to Comment SC-1

SCVWD is committed to completing the Lower Guadalupe River Flood Protection Project as expeditiously as possible. Currently, the Lower Guadalupe River Flood Protection Project is scheduled for completion before or, concurrent with the Guadalupe River Project with Bypass System Alternative. In addition, the Corps and SCVWD have indicated that the Guadalupe River Project with Bypass System Alternative will not be made operational until the Lower Guadalupe River Flood Protection Project has been completed (Draft EIR/SEIS; Section 6.2.1.8, "Lower Guadalupe River Flood Protection Project").

Letter 15

GUADALUPE - COYOTE
RESOURCE CONSERVATION DISTRICT
888 NORTH FIRST STREET RM. 204, SAN JOSE, CA 95112-6314
OFFICE (408) 288-5888 FAX (408) 993-8728 email: gcrcd@pacbell.net

Mr. Terry Neudorf
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

October 15, 2001

Subject: Draft Environmental Impact Report, Lower Guadalupe River Flood Control Project, August 2001

Dear Terry:

Our District has reviewed the DEIR on the Lower Guadalupe River Flood Control Project and submit the following comments:

Alternative 2: Floodwalls Levee Raise (Proposed Project)

We believe this alternative is a continuation of past failed flood control practices. The
accounts in the DEIR state there were efforts since 1983 to achieve a 17,000 cfs flow capacity.
The Guadalupe river is out of equilibrium, which means it produces much more sediment than a
natural river system. This is understood. Information on better channel design has been available
for over 20 years and nationwide better flood protection designs are being implemented. There 15-1
should be no consideration of using old methods that failed on the Guadalupe river. With
Alternative 2 there will be a continuation of sedimentation problems, flooding from lower
sections of Coyote Creek, the Guadalupe Slough and extreme tide/storm events. Additionally,
the DEIR states that ground subsidence has altered the river's longitudinal slope. We believe
there is a need for more than a simple reconnaissance-level investigation of Alviso baylands
downstream of the UPRR bridge (DEIR Ch.1-5). Has there been any geomorphological analysis
of this area? This river system has severe ongoing problems and clearly, there is not enough
information included in this DEIR for the lower Guadalupe which merges with South San
Francisco Bay. In Ch. 6-28 the DEIR states total flood flows are not precisely known; therefore 15-2
the channel will be built to accommodate 17,000-20,000 cfs. Has the large amount of new
building in Alviso and vast amounts of impervious surfaces contributing to the discharge been
taken into account? This unique area requires a detailed geomorphological investigation
in order to provide citizens with adequate flood protection while protecting environmental
values. Further, we doubt that the river will only receive a peak flow of 20,000 cfs. The airport
expansion will also contribute its share of discharge to the Guadalupe river. Please discuss the
impervious surface issue in detail, with anticipated discharges for the 18 projects that are already 15-3
built, under construction or proposed. A river system can convey the amount of discharge nature
designed. As we know, this system discharges into the bay which presents problems if we alter its

design. Either keep a semblance of natural design that will work; i.e. widen modified flood plains
and move the levees back, or use storm drains or bypasses that carry off excess water directly to
the bay instead of conveying it directly into the river. These solutions become extremely
important in light of the Baylands Goals Project which calls for tidal restoration of ponds A5, A7 15-4
and A6. The use of ponds A8W and A8D would then not have the capacity for flood-water
storage at high tide (Pg.46) under the Proposed Project. The proposed GCRCD solutions could
alleviate some impacts to the river system. Nationally, modified flood plains are being expanded
and levees are being moved back in areas that have problems. We are disappointed and disagree 15-5
that an EIS is unnecessary. We strongly believe a proper investigation must include an EIS.
Again, we feel the document is unclear on the Proposed Project plan. Will Alternative 2 be built
if the ponds are unavailable for flood-water storage? What is the anticipated scope of the project 15-6
if the ponds are unavailable?

Cumulative Impacts and Other Required Analysis
Ch.6

The DEIR assessed the Guadalupe River system as encompassing the Guadalupe River
main stem from Alviso Slough to its confluence with Alamitos and Guadalupe Creeks, as well as
the major tributaries and includes study areas for Los Gatos Creek, Guadalupe Creek, Alamitos 15-7
Creek and Arroyo Calero which extends to their reservoirs. Has there been analysis of all the
major tributaries regarding past and anticipated future cumulative impacts?

Under CEQA all cumulative impacts must be addressed. Since velocities, channel erosion
and deposition, as well as impacts to the SRA cover in the Lower Guadalupe River Project
cannot be determined until the final design is chosen, all cumulative impacts cannot be addressed. 15-8
In light of the above, we believe the DEIR has insufficient information and does not comply with
CEQA.

Thank you for your consideration of our comments.

Sincerely,

Nancy Bernardi for

The Board of Directors

cc: Calvin C. Fong
Chief, Regulatory Branch
USACE

Steve Frie, Biologist
Regulatory Branch
USACE

Letter 16

STOEL
RIVES
LLP
[illegible]
Washburn, Briscoe & McCarthy

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

October 3, 2001

ANNE E. MUDGE

VIA FACSIMILE

Mr. Anthony Bennetti
General Counsel
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Re: **Lower Guadalupe River Planning Study: Impacts on Cargill Salt, Inc.**

Dear Mr. Bennetti:

This firm represents Cargill Salt Division ("Cargill"). This letter addresses Santa Clara Valley Water District's ("District's") plan to flood several of Cargill's salt ponds in connection with the District's Lower Guadalupe River Flood Protection Project ("LGRP"). Cargill strongly objects to the District's proposed flooding of its salt ponds as part of the District's existing or future flood control activities. Any flooding of Cargill property arising from the District's activities constitutes inverse condemnation of its property without compensation in violation of the state and federal Constitutions. Such flooding also potentially constitutes a trespass and a nuisance. 16-1

According to the District's draft environmental impact report ("EIR") for the LGRP, the District plans to use Cargill's A5, A7 and A8 salt ponds as flood detention areas during peak flood events. The EIR projects that the District's planned improvements to the Lower Guadalupe (which include levee work and major channel maintenance) are projected to exacerbate the District's existing (unauthorized) potential to flood Cargill's salt ponds. In particular, the EIR acknowledges that allowing the Lower Guadalupe to convey the design floodflow of 17,000 cubic feet per second without increasing the capacity of the Alviso Slough will result in increased depth and duration of flooding in Cargill salt ponds. The EIR also acknowledges that this flooding constitutes a significant environmental impact. However, the EIR neither discusses engineering solutions the District could adopt as part of part of the LGRP that would avoid the flooding nor analyzes the significant damage resulting to Cargill's operations and property interests. 16-2

Oregon
Washington
California
Utah
Idaho
Washington D.C.

Cargill's salt ponds are not open space or retention basins. The salt pond system is, in
fact, the company's production line, and flooding of these ponds would severely disrupt Cargill's
salt-making operations. Ponds A-5, A-7 and A-8 are situated in the center of Cargill's South Bay
system. Flooding of these ponds would effectively eliminate more than 4,000 acres of salt
production, from Mountain View to Alviso, for an undetermined length of time. This represents 16-3
the loss of approximately two years of processing and 20 percent of Cargill's production
capacity. The proposal to "mitigate" this impact by pumping excess stormwater that has been
deliberately directed into these salt ponds exacerbates Cargill's losses by removing brines
(product) from the system. Finally, the ponds have not been designed to accommodate the kind
of increase in volume contemplated under the District's proposal. The resulting increase in pond
depths would subject the salt pond levees to increased erosion and increase the risk of significant 16-4
damage or perhaps even failure. Periodic flooding of the property also devalues the property,
should it be used for other purposes.

We recognize the District's need to provide flood control structures in the Guadalupe
River watershed. However, the District's past and projected flooding of private property is
not reasonable. It places a disproportionate burden on Cargill for the benefit of the public
without reciprocal benefits. It fails to incorporate feasible engineering measures that would
avoid the flooding. Further, the District's proposed flooding of Cargill's salt ponds is
foreseeable and planned. The EIR calls the flooding of Cargill's salt ponds a "mitigation 16-5
measures" designed to address "impacts" of the LGRP project. No matter what one calls
them, designing public flood control works so that they purposefully and directly damage
private property is unreasonable on its face and constitutes an unconstitutional taking under
controlling law.

Cargill is perplexed and dismayed the District has released an EIR publicly announcing its intention to take Cargill's property for public use. Cargill would like to avoid long-term conflict over this issue but is committed to protecting its property interests. We would welcome a meeting to discuss mutually agreeable resolution to these issues.

Very truly yours,

Anne E. Mudge

Anne E. Mudge

AEM:raa
cc: LaRaye M. Osborne, Esq.

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October 12, 2001

ANNE E. MUDGE
email anne.mudge@w-b-m.com

VIA FEDERAL EXPRESS

Mr. Terry Neudorf
Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686

Re: Cargill Salt's Comments on Draft EIR, Lower Guadalupe River Flood Protection Project

Dear Mr. Neudorf:

On behalf of Cargill Salt, this letter provides comments on the Draft Environmental Impact Report ("DEIR") for the Lower Guadalupe River Flood Protection Project ("LGRP") in accordance with Public Resources Code section 21091 and section 15200 of the CEQA Guidelines. The DEIR is inadequate under the California Environmental Quality Act ("CEQA") for all of the following reasons.

There is a fundamental failing in the design and definition of the project that has skewed and undermined a comprehensive assessment of the project's environmental impacts. Although the flood control project ostensibly is intended to convey flood waters from downtown San Jose to San Francisco Bay, the project, for purposes of the DEIR, is artificially defined as one that stops more than 4 miles short of the Bay. (This final segment should have been designated as Reach H for purposes of this project and we have included an exhibit that illustrates Reach H.) The result is to artfully relegate a substantial amount of new construction downstream of the Union Pacific Railroad bridge to "mitigation measures," thereby attempting to avoid a serious analysis of environmental impacts and alternatives as required under CEQA. 17-1

A more sound approach would have been to design the project beginning at the terminus of Alviso Slough with the Bay and working back to downtown. This failing also appears to violate the provisions of the District's 1992 Local Cooperative Agreement (LCA) with the U.S. Army Corps of Engineers. The *Engineer's Report for the Lower Guadalupe River Planning Study* clearly states that the goal of the project is to convey flood waters through the lower 17-2 reaches of the Guadalupe River to San Francisco Bay. The report also states: "Not meeting this requirement would jeopardize the Downtown Project schedule and *violate* the 1992 LCA with the Corps." (Emphasis added.) There is no doubt that the total volume of downtown flows cannot be conveyed to San Francisco Bay by the Lower Guadalupe River Project. Therefore, LCA funding cannot be used to implement this project until this basic requirement is met. Conveying flows to Cargill's salt ponds on either side of Alviso Slough -- well short of San Francisco Bay – does not meet this requirement. 17-2 cont'd.

The result of these failings is that property owners downstream of the Union Pacific Railroad bridge are treated as an afterthought, with little or no analysis of the potential impacts on affected property owners.

There are a number of specific failings in the DEIR that must be corrected:

- Inadequate scoping
- Failure to accurately describe existing conditions
- Failure to accurately describe the project
- Failure to identify significant environmental impacts
- Mitigation measures do not reduce impacts to a level of insignificance
- Proposed mitigation measure is not feasible
- Inadequate cumulative impacts analysis
- Failure to propose an adequate range of alternatives
- Inconsistency with goals and policies in San Jose's general plan

The following are more detailed comments on the failings of the DEIR.

I. Inadequate Scoping: Failure to consult with affected parties prior to release of the EIR.

CEQA Requirement: The CEQA Guidelines call for early consultation with any person or organization that may be concerned with the environmental effects of the project "prior to completing the Draft EIR." (CEQA Guidelines, § 15083.) Though not required, early consultation solves many potential problems that arise in more serious forms later in the review process such as conflicts concerning the scope and contents of the EIR and identification of alternatives, mitigation measures, and significant environmental effects. (CEQA Guidelines, § 15083; Zischke & Kostka, Practice Under the California Environmental Quality Act, § 8.20.) This is particularly true where, as here, the project has such direct effects on adjacent private property.

Failure to Meet Requirement: In this case, the District failed to consult with Cargill in the "early public and interagency consultation" about its plan to flood Cargill's salt ponds as part of the project. Had it done so, it would have heard early on that this plan is not acceptable to Cargill. As explained in a letter from this firm to the District's general counsel dated October 3, 2001, the planned flooding would also constitute a taking of Cargill's property without compensation. 17-3

The District has also failed to include letters received during the scoping process as an Appendix to the DEIR. This should be done so that the public can see whether the District has been responsive to concerns raised during the scoping process.

II. The DEIR Fails to Accurately Describe the Existing Environmental Setting and Conditions.

CEQA Requirement: An EIR must include an adequate and accurate description of the environmental setting and conditions surrounding the project in place at the time the NOP was issued or analysis begun. (Zischke & Kostka, Practice Under the California Environmental Quality Act, § 12.26 (2000).) The environmental setting establishes "the baseline physical conditions by which a lead agency determines whether an impact is significant." (CEQA Guidelines § 15125(a).) The environmental setting describes the "physical environmental conditions in the vicinity of the project" and demonstrates that the "significant environment impacts of a project were adequately investigated and discussed and [permits] the significant effects of the project to be considered in the full environmental context." (CEQA Guidelines § 15125(c).) An inadequate description of the environmental setting may lead to an invalidation of the EIR. (San Joaquin Raptor/Wildlife Rescue Ctr. v. County of Stanislaus (1994) 27 Cal. App. 4th 713 (failure to disclose location and extent of adjacent riparian habitat, inadequate investigation of possible wetlands on site, understated significance of project's proximity to the San Joaquin River, and failure to discuss nearby preserve constituted fatal error in EIR's description of the environmental setting).)

Failure to Meet Requirement:

A. The DEIR Inaccurately Describes the Guadalupe River Watershed.

The existing conditions section of the DEIR inaccurately describes the Guadalupe River watershed as terminating at the UPRR bridge. (See Figure S-1 showing the "Guadalupe River Watershed.") The effect of drawing the line at the UPRR bridge is that the DEIR excludes, with the stroke of a pen, the Alviso Slough from the watershed, the segment that should have been designated as Reach H of the project. Yet the Alviso Slough is the only means by which water flows from the Guadalupe River are conveyed to the San Francisco Bay (other than by flooding private property). The Alviso Slough therefore must be part of the watershed of the Guadalupe 17-4

River. In fact, the DEIR admits this is so elsewhere. On page 3A-1, the DEIR admits that the Guadalupe River Basin "covers an area of approximately 414.4 km (160 square miles) above *the river's confluence with Coyote Creek near San Francisco Bay* . . ." The river's confluence with Coyote Creek near San Francisco Bay is downstream of Alviso Slough and therefore downstream of the UPRR bridge. The Engineer's Report ("ER") also correctly describes the Guadalupe River as flowing "into San Francisco Bay." (ER at 2-1.) Thus, the DEIR's depiction of the Guadalupe River watershed as excluding Alviso Slough (e.g. stopping at the UPRR bridge) is inaccurate and misleading. This truncated view of the watershed is not an insignificant mistake. It sets the stage for the DEIR's mistaken and truncated project description, which, as explained in more detail in Section III below, also stops at the UPRR bridge. 17-4 cont'd.

B. The DEIR Underestimates the Flooding Impacts of Proposed Project.

The significance of environment impacts can only be measured against the baseline of existing conditions. If baseline environmental conditions are erroneously presumed to be poor, an EIR may conclude that adding more to the baseline will not be a significant impact. If baseline conditions are not in fact poor, an EIR may underestimate the significance of the project impacts when added to the baseline. That is exactly what the EIR does in this case.

Here, in assessing the flooding impacts of increasing the capacity of the Guadalupe River upstream of the UPRR bridge, the District erroneously assumes that Cargill's salt ponds are already subject to frequent flooding from the Guadalupe River. The District thus asserts that, with the project, it will convert the existing situation of "potential uncontrolled flooding of the Cargill salt ponds" (p. 3A-19) into one of assured "controlled" flooding of these same ponds. Under this assumption, the DEIR concludes that the incremental increase in flooding from the LGRP will be quite small and therefore not very significant. 17-5

The flaw in this analysis is that Cargill's salt ponds are not already subject to frequent uncontrolled flooding. The draft EIR describes only a single alleged event of flooding under existing (pre-project) flood conditions: January 1995, when the DEIR alleges that Cargill's salt ponds A8D, A8W, A5 and A7 were flooded by flows of 11,000 cfs in the Lower Guadalupe River. (DEIR at p. 3A-9.)[1] Cargill, however, has no evidence that such flooding ever occurred in January of 1995, nor does the District provide any evidence of such flooding. In fact, Cargill's records of water levels, precipitation and evaporation rates in these salt ponds show no overtopping of the levees in any of these salt ponds in 1995. Cargill's records do show some overtopping into pond A8 on March 10, 1995, but the event was not very significant and we have determined that only after a very careful reading of pond records, rainfall and evaporation data.

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[1] The Engineer's Report repeats, without substantiation, that "flows exceeding 6,800 cfs [in Alviso Slough] have been spilling into adjacent salt ponds." (ER at 5-13.) Like the DEIR, the EIR contains no evidence of such alleged flooding. We have researched our records and can find no evidence of flooding at this relatively low flow. Cargill's records for that period can be made available for review by the District and its consultants.

The DEIR asserts also "the levee on the west bank of the Alviso Slough has failed under previous flood events and acts as an informal uncontrolled weir." (DEIR at 3A-13.) In fact, the levee has never failed. Cargill's records indicate only a single, major event during 1998 when floodwaters from San Tomas Aquino Creek temporarily overtopped the levee protecting the western side of Cargill Pond A8D. The levee along the Alviso Slough side of A8D was threatened, but not overtopped. We were in the process of preparing to protect that levee during the February of 1998 event, but stopped our efforts, at the request of the District. Thus, the assumption that the "baseline" environmental condition is that Cargill's salt ponds suffer from frequent long-term uncontrolled flooding from the Guadalupe River is unsubstantiated and, according to Cargill's records, inaccurate. (We note also that Figure 3-5 of the DEIR (FEMA Delineated 100-Year Floodplain) does not show the Cargill salt ponds to the west of Alviso Slough as included within the floodplain.) 17-5 cont'd.

The DEIR's erroneous assumption that Cargill's salt ponds flood frequently under existing conditions causes the DEIR to substantially minimize the incremental increase in flooding to be caused by this project. Because Cargill's salt ponds do not now flood on a regular basis, the majority of the flooding projected by the DEIR to occur in the future will be proximately caused by the proposed project. The DEIR must therefore acknowledge that this project, not existing conditions, will be the major contributor to flooding in Cargill salt ponds. To assume otherwise skews the analysis of impacts as well as the analysis of appropriate mitigation measures.

III. The DEIR Fails to Accurately Describe The Project.

CEQA Requirement: An accurate description of the project is crucial to legal compliance with CEQA; without an adequate description the EIR would fail to engender "public disclosure and informed environmental decision-making." (Zischke & Kostka, Practice Under the California Environmental Quality Act, § 12.14.) For example, a project description that "omits integral components of the project may result in an EIR that fails to disclose the actual impacts of the project" and may be held legally inadequate. (Id.; citing Santiago County Water Dist. v. County of Orange (1981) 118 Cal. App. 3d 818, 829.)

Failure to Meet Requirement: A major flaw of the analysis is that the DEIR arbitrarily excludes Reach H from the project area (DEIR p. S-9) and describes the northern limits of the project as the UPRR bridge. The practical effect is two-fold: (1) the reach of the Guadalupe River downstream of the UPRR bridge is virtually ignored and (2) all of the "improvements" the District plans to install downstream of the UPRR bridge are treated as "mitigation measures," rather than as part of the project. 17-6

Treating these planned improvements as "mitigation measures" rather than as part of the project itself violates CEQA. The improvements planned for downstream of the UPRR bridge are substantial, costing in excess of $4 million. They include construction of a west-perimeter levee around Alviso "from approximately the UPRR trestle downstream to the northeast corner of the County marina" (Mitigation Measure HH-1); construction of an overflow weir in Cargill's levee on the west side of the Alviso Slough (Mitigation Measure HH-2); the pumping of Cargill's salt ponds after flood events (Mitigation Measure HH-3) and the Management of Vegetation in Alviso Slough from UPRR downstream to the overflow weir." (Mitigation Measure HH-4.) Excluding them from the project description creates an inconsistent project description within the DEIR, in particular as compared to the description of the project as implementing the Local Cooperation Agreement ("LCA") between the District and the Army Corps of Engineers. (DEIR, p. S-2, S-3, S-5, 1-4, 1-5, 1-6.) Under the LCA, the District is obliged to provide the Corps' design flood flow capacity for the entire lower Guadalupe River: "from Interstate 880 downstream *to San Francisco Bay*" (LCA; p. 5, Article II, para. k [emphasis added.].) The LCA does not say the District must only convey peak flow from "Interstate 880 downstream to the UPRR bridge." If the project is the implementation of the LCA, as asserted repeatedly elsewhere in the DEIR, it must include the portion of the Guadalupe River between the UPRR bridge and the Bay.

Appendix F of the DEIR[2] also describes the "Lower Guadalupe River Flood Protection Project as including "flood control measures on the Guadalupe River between 1-880 and the Alviso UPRR bridge *and downstream from the Alviso UPRR bridge in Alviso Slough* . . . The entire length of this project has earthen levees on both banks." (Emphasis added.) Appendix F thus includes the improvements downstream of the UPRR bridge as an integral part of the project.

17-6
cont'd.

The District also has no reason to treat the downstream improvements differently from the improvements upstream of the bridge in this EIR. So-called "mitigation measures" HH-1 through HH- 4 are similar, if not identical, to other proposed flood control improvements upstream of the UPRR bridge (See Table 7-1 of the ER). They consist, among other things, of raising of existing levees and vegetation management — the very same measures the District is proposing in reaches A-G. These improvements are also depicted on Figure 5-2 of the Engineer's Report and described as "Baylands Improvement Plan," not as "LGRP Mitigation Measures." They are also shown in Table 7-1 of the EIR as part of the "Baylands" portion of the "Lower Guadalupe River Project," with a projected cost equal to or exceeding the cost of improvements in other reaches. It is a fiction to treat them as "mitigation measures." They are part of the project itself.

17-7

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[2] Appendix F consists of the cumulative impacts analysis from the District's February 2001 EIR/EIS for the Guadalupe River Project, Downtown San Jose.

The only goals accomplished, it appears, by arbitrarily excluding these measures from the project description are to allow the District to avoid discussing alternatives to these improvements and to perform only a superficial "reconnaissance-level" study of the area downstream of the UPRR bridge (DEIR, p. 3A-13.) If the construction of the overflow weir and resulting flooding of the Cargill lands had been included as part of the project description (as was envisioned by the District's own Guadalupe River Project, Downtown San Jose EIR/EIS), the DEIR would have been required to assess a full range of alternatives to convey flows all the way to San Francisco Bay, not just to the UPRR bridge. (CEQA does not require a discussion of alternatives to mitigation measures, just a discussion of alternatives to the project.) It would also have required the District to perform more than a reconnaissance-level study of the are that should have been designated as Reach H.By excluding these features from the project description, the DEIR fails to provide an accurate and adequate description of the project and impermissibly avoids studying alternatives that would avoid a major impact of the project: the flooding of Cargill's salt ponds. 17-7 cont'd.

IV. The DEIR Fails to Identify Significant Environmental Impacts.

CEQA Requirement: An EIR must identify and describe the project's significant environmental effects. (Pub. Res. Code § 21100(b)(1); CEQA Guidelines, § 15126(a).) A significant environmental effect is defined as "a substantial, or potentially substantial, adverse change in the environment." (Pub. Res. Code § 21068.) Significant environmental effects include direct and indirect, short-term and long-term effects. (El Dorado Union High School Dist. v. City of Placerville (1983) 144 Cal. App. 3d 123 (school construction and enrollment was an indirect and significant environmental effect arising from a residential development and thus required analysis under CEQA).) "Identification of a project's significant environmental effects is one of the primary purposes of an EIR and is necessary to implement the state public policy that agencies should not approve projects if there are feasible mitigation measures or project alternatives available to reduce or avoid environmental impacts." (Zischke & Kostka, Practice Under the California Environmental Quality Act, § 13.2.)

Failure to Meet Requirement:

A. The DEIR Fails to Analyze the Conflict Between Existing and Proposed Land Uses.

At p. 3H-14 and 3H-15, the DEIR addresses the potential of the proposed project to conflict with existing and proposed land uses. The DEIR fails, however, to discuss the inconsistency between the proposed use of Cargill's salt ponds as flood retention ponds under the project and its existing use for the commercial production of salt. Proposed construction of the weir and the resulting flooding of the salt ponds is a significant conflict with the existing land 17-8 use (the evaporation of water to concentrate salinity). Use of the ponds as floodplains also conflicts with potential future land uses for the ponds as mitigation banks or other types of economic development. The DEIR concludes on p. 3H-20 that impacts to the existing land uses are not significant "because construction of the proposed structures would not require a change in any current land use." This conclusion fails to assess the impacts flooding would have on the Cargill's on-going salt making operation, the serious interruption to Cargill's production line from flooding, and how much salt production capacity would be lost from a peak flood event. 17-8 cont'd.

B. The DEIR Underestimates the Flooding Impact of the Proposed Improvements.

As explained above in section II.B, the DEIR underestimates the flooding impacts of this project by erroneously assuming that Cargill's salt ponds are subject to frequent and/or severe overtopping from Alviso Slough under existing conditions. There is no evidence to support that assumption. Cargill's records show no such flooding of ponds A8W, A8D, A5 and A7 in the recent past. As such, the projected flooding impacts *of the project* will be far more severe than is disclosed by the DEIR. The DEIR must be rewritten and recirculated to reflect this new conclusion. 17-9

C. The DEIR Fails to Analyze the Extent of Loss or Injury to Cargill.

The Draft EIR correctly describes the exposure of people or structures to significant "loss" or "injury" due to flooding as a significant environmental impact under CEQA. (DEIR at 3A-12.) It concludes, however, that with the imposition of certain proposed mitigation measures (including pumping), the impacts will be reduced to a level of less than significance.

This conclusion is not supported by any evidence. Despite recognizing that "loss" and "injury" to property are measures of environmental damage, the DEIR makes no attempt to quantify the "loss" and "injury" Cargill's salt-making operations will experience as a result of the project. The DEIR therefore lacks any basis on which to conclude that Cargill's "loss" and injury" can be reduced to a level of less than significance. In fact, flooding of Cargill's salt ponds will cause millions of dollars of "loss" and "injury" to Cargill's salt-making operations, even after the proposed "mitigation measures" are implemented. 17-10

Cargill's salt ponds are not open space or retention basins. The salt pond system is, in fact, the company's production line, and flooding of these ponds would severely disrupt Cargill's salt-making operations. Ponds A-5, A-7 and A-8 are situated in the center of Cargill's South Bay system. Cargill's salt ponds do not function as individual, autonomous units. Instead, they are part of an integrated, single system that convey brines from the intake ponds near Mountain View through the Alviso and San Jose areas to the company's plant site in Newark. Flooding of these ponds would effectively eliminate more than 4,000 acres of salt production, from Mountain

17-10 cont'd. View to Alviso, for an undetermined length of time. This represents the loss of approximately two years of processing and 20 percent of Cargill's production capacity. The proposal to "mitigate" this impact by pumping excess stormwater that has been deliberately directed into these salt ponds exacerbates Cargill's losses by removing brines (product) from the system. Periodic flooding of the property also devalues the property, should it be used for other purposes.

D. The DEIR Fails to Analyze The Potential of Flooding Events to Weaken Internal Salt Pond Levees.

17-11 The DEIR fails to analyze the potential of the project's induced flooding to weaken Cargill's internal salt pond levees. These levees currently separate ponds A8D from A8W, ponds A8W from A7, and pondsA7 from A5. The ponds have not been designed to accommodate the increase in water volumes contemplated under the District's proposal. The resulting increase in pond depths would subject the salt pond levees to increased erosion and increase the risk of significant damage or perhaps even failure. In large flood events, these internal levees could be inundated for weeks, causing significant damage. This potential is disclosed for levees protecting the town of Alviso (p.3A-14) but is ignored as an impact for internal levees protecting Cargill's ponds.

E. The DEIR Underestimates the Amount of Sediment and Debris That Will Be Deposited into Cargill Salt Ponds.

17-12 At pp. 3B-12 through 3-B13 , the DEIR examines the issue of sediment deposition in the Cargill salt ponds and concludes that the impacts from increased sediment deposition will not be significant because the "volume of floodwaters entering the salt ponds would increase by approximately 1,500 af or 13%" and because "pumps would remove a portion of this additional sediment load."

This analysis is flawed. Elsewhere, the DEIR estimates that there will an increase in the volume of floodwaters by between 16 and 22% – not 13% – in ponds A5, A7 and A8. (DEIR at p. 3A-14.) Second, the DEIR assumes that pumping will not commence until two weeks or more after the flood event. Sediments will have settled to bottom of the ponds at this point and will not be pumped out. The DEIR also does not indicate what portion of the additional sediment load is expected to be removed by the pumping. The DEIR's conclusion that the increased sediment load will not cause a significant environment impact is therefore unsupported by substantial evidence.

Furthermore, the DEIR does not make any attempt to analyze the potential for debris to be deposited in the ponds during severe flood events or how such material would be removed before it could damage Cargill's levees.

F. The Draft EIR Underestimates Impacts to Special Status Species.

The Draft EIR fails to analyze the impact of the project on the following issues related to special status species:

- Pond A-8D currently provides desired habitat for the threatened Western Snowy Plover, a species that prefers unvegetated surfaces. Recent studies also indicate that surface areas must have a mottled appearance and coloration that provides effective camouflage for adults and their young. Periodic flooding of this pond would dissolve the salt crust on the pond bottom, which would then be removed from the pond by pumping. Elimination of the light salt crust would encourage vegetation to grow as well as potentially changing the coloration of the pond bottom, thereby impacting desired habitat for the Western Snowy Plover. In addition, pumping could eliminate significant food sources for the Snowy Plover and other species by removing brine shrimp and their cysts as well as other invertebrates from the pond. 17-13
- The proposed "mitigation" measure of pumping water from the ponds appears to be geared only toward the nesting season. There is no analysis of the impact of floodwaters on winter (non-nesting) habitat for the Snowy Plover in this pond. 17-1
- Flooding in A-5, A-7 and A8W could cause loss of nesting habitat for breeding birds. Areas currently used for nesting can erode and eliminate islands and the internal levee system in these ponds. Elimination of the islands and levee erosion would impact and potentially eliminate significant breeding, nesting and roosting areas for birds. 17-15
- The assumption that the salt ponds are regularly flooded under existing conditions is wrong. Therefore, there is an incremental impact to fish habitat and anadromous fish migration that needs to be evaluated. 17-16

V. The Proposed Mitigation Measures Do Not Reduce Impacts To a Level of Insignificance

CEQA Requirement: In deciding whether to approve a project, public agencies have a duty to avoid or minimize environmental impacts where feasible. (CEQA Guidelines, § 15021.) An EIR must recommend mitigation measures and alternatives that would avoid or reduce a project's impacts to a level of insignificance, or alternatively, must include a detailed statement of those significant effects that cannot be avoided. (Pub. Res. Code § 21100(b)(2)(A).)

Failure to Meet Requirement: As explained above, pumping is not an adequate remedy. Flooding destroys the salt production capacity of the ponds. Pumping out the diluted brines after 17-17 a peak storm event does not restore the salt ponds to production. The amount of pumping proposed by the District is also not adequate since the DEIR does not propose to restore the water levels in the ponds to pre-flood levels. Instead, the DEIR proposes to remove only the "incremental" increase in flooding. As discussed earlier, the concept that the ponds already are being flooded to some theoretical level is a fiction. Furthermore, to the extent there are flood risks under existing conditions, this condition has been caused by prior District activities. 17-17 cont'd.

VI. The Proposed Flooding As A Mitigation Measure is Not Feasible.

CEQA Requirement: A mitigation measure can only be imposed where that mitigation measure is feasible and enforceable. (Pub. Res. Code §§ 21001(c), 21002, 21002.1(b); CEQA Guidelines, § 15126.4(a)(2).) To be feasible, mitigation measures must be capable of being accomplished legally. (Kenneth Mebane Ranches v. Superior Court, 10 Cal. App. 4th at 291 (mitigation measure infeasible where flood control district did not have authority for extraterritorial condemnation for proposed mitigation of environmental impacts).)

Failure to Meet Requirement: In this case, directing floodwaters into Cargill's salt ponds by installing an overflow weir into the levee would be an illegal taking of Cargill's property without compensation. As such, this "mitigation measure" is beyond the power of the District's to impose. If the District wishes to use Cargill's salt ponds as flood detention basins, it must purchase them for that purpose. 17-18

In addition, the DEIR simply assumes, without any analysis, that there will be sufficient capacity in Cargill's salt ponds to easily accommodate the sudden injection of an unknown quantity of floodwaters. As described earlier, Cargill operates its ponds for salt production only. In periods of heavy rains, water levels in the ponds are likely to be higher than normal already. To make this mitigation measure work, Cargill would be required to significantly alter the operation of its salt-pond system – not just locally but potentially on both sides of A-8, A-7 and A-5 – to ensure sufficient capacity in the ponds to the detriment of its salt-making operations. 17-19

VII. The DEIR Contains An Inadequate Cumulative Impacts Analysis.

CEQA Requirement: An EIR must contain a sufficient analysis of cumulative impacts "when the project's incremental effect is cumulatively considerable, as defined in section 15065(c)." (CEQA Guidelines, § 15130(a); Whitman v. Board of Supervisors (1979) 88 Cal. App. 3d 397, 409 [EIR failed to adequately address cumulative impacts].) A cumulative impact analysis is necessary to provide adequate information and "to afford the fullest possible protection of the environment." (Citizens to Preserve the Ojai v. Board of Supervisors (1985) 176 Cal. App. 3d 421, 431-432.)

Failure to Meet Requirement: One of the major errors in the DEIR is that it erroneously concludes that "the cumulative effect of the operation of the LGRP in combination with other projects on the Cargill salt ponds would be the same as the project-level effects." (DEIR, p. 4-11.) The DEIR also erroneously concludes that "there would be no cumulative effects associated with flooding of the Cargill salt ponds because flooding of the salt ponds would be attributable only to operation of the LGRP and not flows from Guadalupe Slough or Coyote Creek." (Id.)

17-20 The DEIR cannot exclude impacts from flows from Guadalupe Slough or Coyote Creek in the salt ponds as part of the cumulative impacts analysis if these water bodies contribute floodwaters to the ponds during peak flows. In fact, it appears that the only record Cargill has of significant flooding in A8 is in 1998 when the levee on the San Tomas Aquino Creek (from the West Valley Watershed) side of A8 was overtopped by flows from Calabazas Creek. As noted previously, we apparently did have some overtopping in March of 1995, but that event was minor when compared to the events of February 1998, which were from different watershed. To be adequate, the DEIR must analyze the flooding potential from all sources, including the Alviso Slough, San Tomas Aquino Creek, Guadalupe Slough and Coyote Creek. To the extent Cargill's pond level and rainfall records are helpful, they can be made available to the District staff.

17-21 The DEIR's focus on a single watershed is a serious failing as both the Guadalupe Watershed and the West Valley Watershed flow toward Cargill's salt ponds. If peak flows from both watersheds arrive simultaneously at the perimeter of Pond A8, then the situation is dramatically different from the events analyzed in the DEIR.

17-22 A further error in the cumulative impacts analysis of the DEIR is the assumption that the cities of San Jose and Santa Clara will cease or restrict their emergency pumping of local storm water into the Guadalupe River when the River reaches capacity at 17,000 cfs. In the EIS/EIR for the Guadalupe Project, Downtown San Jose, the District explains that "the total floodflow rate it is not precisely known . . . because it is anticipated that that some of the additional channel capacity would be used for conveyance of local storm water. Up to 3,000 cfs of local stormwater could be pumped from lands adjacent to the Guadalupe River in the area between Highway 101 and the Alviso UPRR bridge. The Lower Guadalupe River Project will be designed to convey up to 20,000 cfs to accommodate the potential stormwater pumping." (Appendix F, DEIR at p. 6-21.) Clearly, however, the LGRP has not been designed to accommodate 20,000 cfs. Instead, the District is relying on the cities of San Jose and Santa Clara to voluntarily limit or restrict pumping of local storm water into the river when it reaches peak flows – something that is extremely unlikely in the heat of the moment when millions of dollars are at immediate risk. This proposed measure was recognized to be unrealistic by the District as late as February 2001. The District asks the public to suspend credulity to suggest that 17,000 cfs will be adequate given the cumulative impacts of this emergency pumping. Unless District can guarantee that these cities, residents and businesses will act against their own interests, the DEIR must assume there will be significant additional flows as a result of local actions in the cumulative impacts analysis. 17-22 cont'd.

VIII. The DEIR Does Not Propose An Adequate Range of Alternatives.

CEQA Requirement: An EIR must include a range of reasonable alternatives to the project and/or the project's location "which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (CEQA Guidelines, § 15126.6(a).) The EIR shall also contain "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." (CEQA Guidelines, § 15126.6(d).) An EIR is required to assess a reasonable range of alternatives. (Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal. 3d 553, 566.)

Failure to Meet Requirement: The DEIR does not include an adequate range of alternatives because it artificially terminates the project at the UPRR bridge. In particular, DEIR should include an alternative that reduces the "induced flooding impacts" in the town of Alviso and the Cargill salt ponds.

Alternatives that could have been studied include, but are not limited to the following:

- Dredge Alviso Slough from UPRR bridge to the San Francisco Bay
- Build up levees on both sides of Alviso Slough to the San Francisco Bay
- Create bypass to Guadalupe SloughBuild up internal levees to protect salt ponds
- Purchase additional property for conversion to a flood plain

17-23

The failure of this DEIR to include alternatives addressing different ways to convey peak flows downstream of the UPRR bridge is particularly egregious in light of the assurance in the Joint EIR/EIS prepared for the Guadalupe River Project/Downtown San Jose (February 2001) that the "EIR/EIS for the Lower Guadalupe River Project will address a full range of alternatives for flood protection down from I-880 *and for conveying floodflows downstream from Alviso.* . . The Lower Guadalupe River Project EIR/EIS will address the potential direct, indirect, and cumulative impacts of each alternative on natural resources in the Guadalupe River watershed, *including the Alviso Slough area.*" (Appendix F to DEIR at p. 6-11 [emphasis added].) Appendix F specifically states that the EIR/EIS for this project will include an analysis of alternatives "between the Alviso UPRR bridge and the confluence of Alviso Slough with Coyote Creek" including "raising existing levees, building new floodwalls, setting levees further back from the slough, establishing a floodplain terrace or a combination of these alternatives." (DEIR, Appendix F at 6-12.)

In contravention of the District's assurances in the Downtown Project EIR/EIS that this EIR would contain an adequate alternatives analysis, the DEIR in fact fails to contain any analysis of alternatives to convey flows to San Francisco Bay. It instead pretends that the reach of the river downstream of the UPRR bridge is not even part of the project description at all. This is a serious violation of CEQA and of the District's own public assurances that "a full range of alternatives . . . for conveying floodflows downstream from Alviso" will be addressed. 17-24

IX. The Proposed Project is Inconsistent with Goals and Policies in San Jose's General Plan.

The proposed project is not consistent with the flood protection policies of San Jose's General Plan and therefore should not be approved. The DEIR discusses this topic at pp. 3H-8 through 3-H11 The City of San Jose 2020 General Plan contains several goals and policies not mentioned in the DEIR with which the proposed project does not comply. These include the following:

Flooding Goal 1: Protect the community from the risk of flood damage.

Cargill's salt ponds are within the City of San Jose and within the Santa Clara Valley Water District's boundaries. It is private property in the community deserving of flood protection. The proposed project will purposefully flood Cargill's salt ponds in order to protect other properties in the community. This is not acceptable to Cargill and conflicts with Flooding Goal 1 of the San Jose 2020 General Plan. 17-25

Flooding Policy 1: New development should be designed to provide protection from potential impacts of flooding during the 1% or 100-year flood.

The District's project constitutes new development within the meaning of Flooding Policy 1. Yet, this new development is not designed to protect Cargill's property from damage from the 100-year storm. Indeed, Cargill's property is being sacrificed in order to provide this protection to other properties. 17-26

Contrary to assertions made in the DEIR at p. 3H-15, the project is also inconsistent with several of the policies of the 2020 DEIR does mention. In particular, the project is not consistent with Storm Drainage and Flood Control Policy 12, requiring new developments to "be designed to minimize potential damage due to storm waters and flood to the site and to other properties." It is also not consistent with Storm Drainage and Flood Control Policy 13, requiring that "in designing improvements to creeks and rivers, adjacent properties should be protected from flooding." In this case, the proposed improvements to the lower Guadalupe River will not minimize damage to Cargill's salt ponds and will not protect adjacent properties, such as the salt ponds, from flooding. 17-27

X. Conclusion.

The DEIR is not adequate and needs to be revised and recirculated to correct the deficiencies pointed out this letter. Most fundamentally, the project scope needs to be redesigned to include means to convey floodwaters to San Francisco Bay. The District's flood control protection responsibilities do not stop at the UPRR bridge. Until this is accomplished, the DEIR will remain legally inadequate since it fails to disclose the project's full scope and environmental impacts. 17-28

Very truly yours,

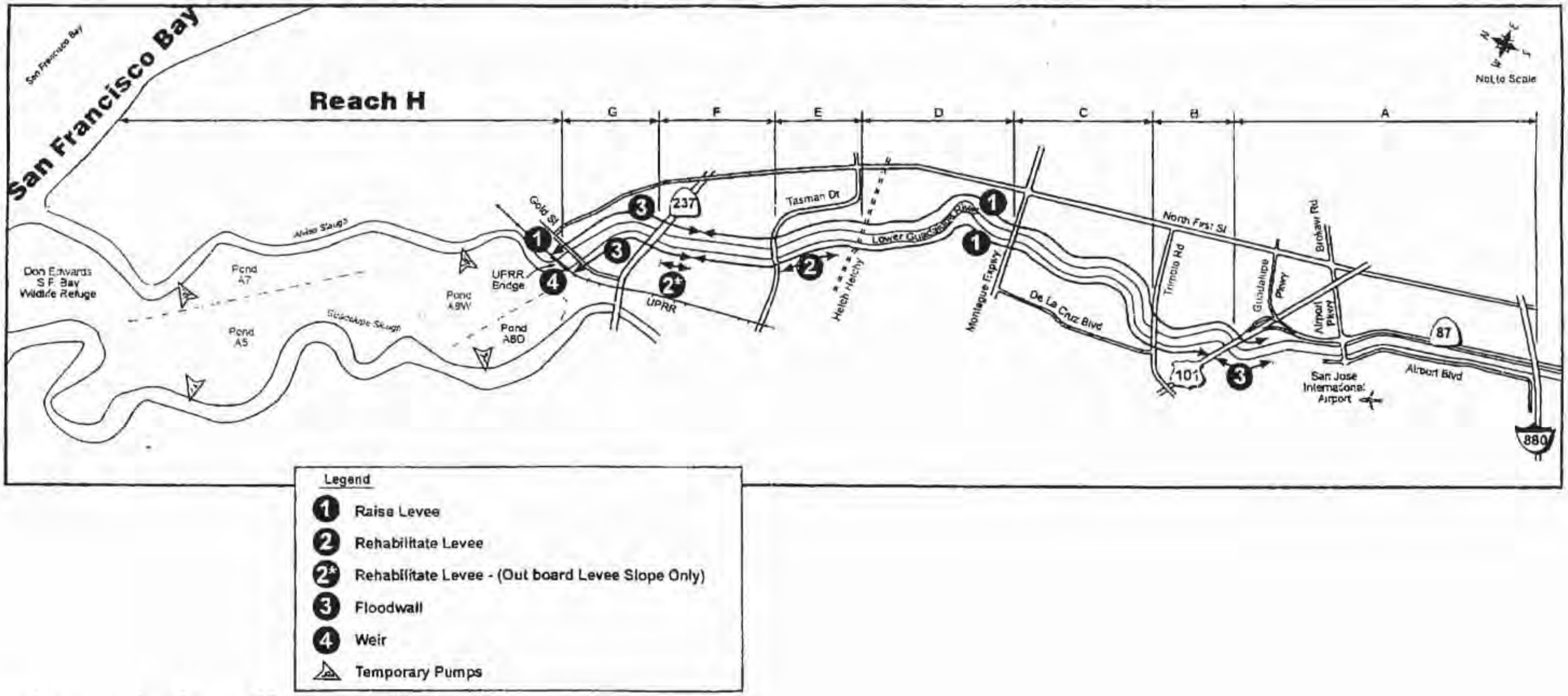
Anne E. Mudge

Anne E. Mudge

AEM:raa
Enclosure
cc: Robert Douglass
LaRaye Osborne
Barbara Ransom
Lori Johnson
Brandon Muncy

Recommended Alternative: Floodwall/Raise Levee

Santa Clara Valley Water District



Enclosure to Anne Mudge letter

to Terry Neudorf of October 12, 2001

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October 15, 2001

Mr. Terry Neudorf:
Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Re: Lower Guadalupe River Flood Protection Project

Dear Mr. Neudorf:

This letter is accompanies the letter from Anne E. Mudge of the law firm of Stoel Rives, LLP on behalf of Cargill Salt and provides additional comments on the Draft EIR for the Santa Clara Valley Water District's ("SCVWD") Lower Guadalupe River Project. This letter provides certain technical comments on the validity of the conclusions in the Draft EIR.

1. The Draft EIR Overestimates Existing Flood Potential.

The Draft EIR concludes that Cargill's salt ponds are currently subject to flooding during a 100-year storm event. This evaluation is due to a significant change in SCVWD's project design standards that attributes greater flooding potential to existing conditions than actually exists.

The SCVWD Guadalupe River 1982 project report was based on less conservative design standards and showed that the 17,000 cfs design flow would be contained in Alviso Slough. The 1982 design profile was at elevation 6.5 ft NGVD at the UPRR bridge, which is below the lowest levee elevations along the slough. Although not explicitly stated, this appears to be because the of a lower starting water level at the San Francisco Bay, lower channel roughness estimates for Alviso Slough, and changes in the slough channel cross sections. 18-1

The project hydraulics for Alviso Slough in the current DEIR are based on a higher starting water level at the bay and higher channel roughness factors for the slough. The slough design profile starts at the 10-year tide level of 7.5 ft NGVD at the bay. The channel roughness factors for the slough included 0.03 for the low flow channel and 0.08 for the overbank vegetated area of the channel. While these conservative values may be appropriate for channel design (since they provide additional safety factors for the project), they appear to be too conservative for an evaluation of existing conditions.

2. The Hydraulic Model Calibration Is Not Appropriate For Alviso Slough Existing Conditions.

The NHC Draft Existing Conditions Report (Engineers Report, Appendix B) documents the development and calibration of the hydraulic model used in the DEIR. The model was calibrated for estimated flows and highwater marks from the January 1995 and January 1997 peak flow events. The report does not include detailed information for the Alviso Slough reach. However, Figure 19 for the 1995 event shows calculated water levels above the highwater marks downstream of the UPRR bridge near the low area of the A8 levee. Similarly, Figure 20 for the 1997 event shows calculated water levels above the highwater marks.

Based on Cargill records, there were no overflows from Alviso Slough in either January 1995 or January 1998. This directly contradicts the calibration, which assumes that there was a significant overflow into the Cargill ponds. 18-2

It appears that the Alviso Slough reach of the river was not considered part of the SCVWD project, and that a conservative water level may have been acceptable for project design conditions. The roughness factors for the slough are similar or higher than upstream channel reaches, and may not accurately represent the tidal vegetation conditions in the slough. A more detailed calibration of the actual tide levels and slough hydraulics may lead to less conservative water surface levels that more accurately reflect the actual slough conditions.

3. Existing Condition Hydraulic Model Uses Conservative Design Values

The Draft EIR impact analysis of the Cargill ponds is based on the conservative hydraulic model developed for the project design and does not represent existing conditions. In particular, the starting water level at the bay and the channel roughness factors appear conservative.

The starting water level at the bay of the 10-year tide level is 7.5 ft NGVD. The FEMA standard is mean higher high water (MHHW), which would be approximately 4.6 ft NGVD. This difference is significant. While the design of a flood control channel may consider a coincident extreme high tide, it does not appear reasonable for evaluation of the existing flood risk. 18-3

Similarly, the estimated existing condition roughness factors for Alviso Slough exceed the design values shown in the Engineers Report, Table 4-1. The low flow channel value of 0.03 is higher than for sacked concrete at 0.025. The overbank value of 0.08 is significantly higher than for brush/heavy brush at 0.045. This does not represent the tidal vegetation in Alviso Slough.

4. The Draft EIR Underestimates Existing Slough Capacity

The EIR and Engineers Report appear to conflict as to the existing capacity of Alviso Slough. The EIR states that the existing channel capacity is 6,800 cfs. The Engineers Report describes the existing channel capacity as approximately 8,000 cfs. The flood of record, January 1995, was estimated to be 11,000 cfs. Based on Cargill observations and records, there was no overflow from the January 1995 event. The 1995 event was estimated to be 60 percent greater than the stated capacity of 6,800 cfs.

The existing slough capacity is a critical value in the evaluation of the potential project impact. The low estimate of the existing channel capacity tends to overstate the risk of flooding in the Cargill ponds, and therefore understate the potential increase in flooding due to the SCVWD project. The EIR analysis shows a net increase in overflow volume of approximately 20 percent for the 100-year event. This percentage increase would be much larger if the existing slough capacity is higher. If the existing channel capacity is 14,000 cfs, the nominal existing condition 100-year flow rate, the entire overflow would be due to increase flows from the project and the percentage increase would be infinite. 18-4

5. The DEIR Fails to Assess the Impacts of Smaller Flood Events

The EIR evaluates potential project impacts for only the 100-year design event. There is no evaluation for smaller flood events that are closer to the estimated Alviso Slough capacity. The potential project impact may be much greater for these smaller more frequent events if the project increases the channel flows. The EIR describes the existing slough capacity as approximately a 10-year event, but there is no evaluation as to whether—and how much– the project may increase flows for the 10-, 25- or 50-year events. 18-5

6. The DEIR Fails To Adequately Assess Pond Flooding Impacts

The EIR considers only the additional volume of overflows to the Cargill ponds due to the SCVWD project. The mitigation plan to pump out the additional volume does not mitigate for all of the potential damage associated with the additional volume.

The pond levees are subject to flood damage due to long term high water levels in the ponds. The outboard levees are constructed of bay mud fill and can be weakened by extended high water levels due to saturation, slump of the saturated material, and wave action. In addition, the potential for wave action is greater for deeper water levels in the ponds. The development of wind-generated waves in the ponds is limited for shallow pond depths. Deeper pond depths would allow the development of larger waves and greater perimeter levee erosion. The longer duration of flooding can also affect the limited existing vegetation on the levees and reduce the erosion protection provided by the vegetation. 18-6

The interior levees are lower than the outboard levees and would be subject to overtopping and complete inundation for the pond levels estimated in the EIR impact analysis. The interior levees would have a greater potential for damage than the outboard levee due to overtopping, long-term saturation, fill slump, and wave action. In addition, the interior levees include access roads to Cargill facilities. The longer duration of flooding would extend the period that these facilities would be inaccessible. The longer duration of flooding and increased fill saturation may also extend the period required for the fill material to dry and stabilize to allow heavy vehicle access. 18-6

Thank you for considering these comments to the Draft EIR.

Yours very truly,
SCHAAF & WHEELER

Kirk Wheeler, PE
Principal

cc Anne Mudge, Stoel Rives, LLP
Robert Douglass, Cargill Salt

Letter 19

SOUTH BAY YACHT CLUB
Alviso, California

30 September, 2001

Board of Directors and
Terry Neudorf
Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Reference: Draft Environmental Impact Report, Lower Guadalupe River Flood Protection Project, and Dated August 2001

The following comments are submitted for strong consideration with respect to the subject EIR and plan for controlling the flooding threat presented by the lower reaches of the Guadalupe River. There are some general comments about the project and some specific indications of our concerns that relate to the Summary.

It is the opinion of the South Bay Yacht Club, who I represent, along with many others in Alviso, who feel that this plan again falls short of providing any lasting flood protection. All such projects as this, must be designed, built, and MAINTAINED to the worst scenario presented in a 100-year flood. This plan does not adequately address that situation and in my opinion falls short of applying all of the contributing factors that should be considered in determining the actual threat. 19-1 It also poorly represents what maintenance will be required and how that maintenance will be accomplished. As a point of reference, I have included as an attachment, a letter that I sent to the SCVWD in 1995 pointing out the lack of maintenance in the Alviso area. The problem stated then has grown significantly worse without any action on the part of the district to correct the problem. There are no assurances in this plan that significant on going work to keep the channel clear will be accomplished, and from our long experience with the area, it most assuredly will be required. 19-2

Since the last lower Guadalupe project in 1983, in which we as a club were heavily involved, no adequate maintenance has been done in the riverbed in and around Alviso. Non-native weeds and trees have been allowed to grow unchecked causing greater than normal siltation that has severely restricted the flow capacity of the river channel. In 1995 the river came very near toping the levee due to this poor maintenance. The district has since stated that these events were close to a 25-year flood. Therefore, the flow was only 25% of what might be expected in a 100-year event. In 1983 the river might have had the capacity to handle a 100-year flood, but due to the total lack of any maintenance inside the river channel, the capacity was reduced and a disaster nearly occurred. 19-3

The EIR and engineers' report assumes that no additional flows into the river will occur. It also assumes that the City of San Jose, and perhaps other municipalities with storm drain pumps, will turn off those pumps if the river is approaching the over topping state. That assumption should be totally discounted as no plan of action has been agreed to by those cities to restrict their discharge of storm water into the river. Even if there were such an agreement, there is no assurance that it would be followed. The development and infill of the valley land continues. Along with that development comes more streets, parking lots, and buildings which do not allow the ground to absorb the rainwater. Unless there is a building moratorium, which stops such development, the water reaching the river will increase. It is my opinion that a significant safety factor should be allowed in the river flow estimates. The estimates should take into consideration first, the limited capacity to do proper maintenance, secondly, the issue of the existing storm water pumps, and lastly, the certain expansion of the hard surfaces and resulting river flow caused by the development. Without these increases in the flow capacity of the river, Alviso and the heart of Silicon Valley will flood again before the NEXT flood control project for this area is NEEDED and accomplished. 19-4

The following must be pointed out as errors in the EIR or comments on these specific sections or paragraphs:

Page S-3 paragraph 1: This paragraph cites that sediment management began as part of the 1983 improvements. We must point out that no sediment or vegetation control has been done in the downstream section near the Gold Street or SPRR Bridge. The lack of maintenance has been constantly pointed out to the district without any effort to alleviate the problem being undertaken. The levees from the SPRR Bridge to the Alviso Marina were also raised after the 1995 near disaster contrary to what is reported in the EIR. 19-5

Page S-3 paragraph 2: The report states that the capacity of the river in the Alviso area was increased in 1983 to 12,000 cfs. Now this EIR states that the capacity is 14,000 cfs. The siltation and vegetation growth has increased in the area in such a way that it is apparent that the 12,000-cfs capacity (if that was the actual capacity) has been severely degraded. This engineering statement is therefore in question. The capacity should be accurately calculated from actual measurements, not some obscure and inaccurate previous report. 19-6

Page S-3, paragraph 3: This paragraph again states that a management plan for vegetation growth is in place which strives to maintain as much capacity as possible. There is no effective plan that is in place and, as such, the capacity of the river has not been maintained. If there is a plan focused on restoring the channel capacity to 17,000 cfs, it has not been implemented to my knowledge. 19-7

Page S-4, paragraph 1: The scope of the 1983 project is stated as being from the UPRR Bridge in Alviso to U.S. 101. I must point out that a significant reach of the project was from the UPRR Bridge to the County Marina. The project entailed a complete realignment and rebuilding of the eastern levee next to the town of Alviso. It also necessitated the move of the historic South Bay Yacht Club building which was built in 1903. This additional reach should be included in the proposed effort, and not called a mitigation project. Without significant attention to this reach, the waters cannot pass through safely, and flooding may well occur. 19-8

Page S-5, paragraph 1: We concur that this project must be completed adequately before the bypass channels through San Jose are allowed to be opened. To do so, with the knowledge that property and lives downstream might be in danger of flooding, is contrary to all law and could result in significant litigation against the district. 19-9

Page S-11, paragraph 1: The statement says that the proposed project is based on the assumption that vegetation and sediment must be managed. The implementation of an aggressive and ongoing plan must be a key part of this effort. Based on the lack of past performance, this project is destined to failure. The rapid growth and siltation in the area dictates that removal of both siltation and vegetation is mandatory and must be ongoing. To my knowledge, adequate funding and permits are not available to accomplish this task. Vegetation removal, as in reach G, should be accomplished on the entire project, where weeds now exist, to allow a maintenance effort to be done after the project is completed. 19-10

Page S-12, Alternative 4: Sediment is not now controlled. To expect that it could be done effectively in a box culvert in a cost effective manner is very questionable. 19-11

Table S-1, Baylands Mitigation Measure HH-4

(Page 1 of 41): Vegetation removal and sediment removal should not stop at the Overflow Weir, but be extended past the County Marina. Without this buffer zone, the cleared area will rapidly fill back in and reduce the capacity of the river and place the town of Alviso at risk. A significant plan is also underway to place a launch ramp in the river near the old silted in County Marina. The interest of the public good should be strongly considered so that this worthwhile project is not impacted. 19-12

(Page 3 of 41): Strong consideration should be given to removal of all non-native plants in the riverbed. The "bulrushes" as an example grow very rapidly and go to seed. New additional plants grow along with the older plants and make an almost impenetrable barrier, which traps silt and accelerates the rapid diminution of the capacity of the channel. At present, the growth is primarily the habitat of large rats left over from the garbage dumps that used to be in the area. These rodents present a threat to other wildlife in the area and if their habitat were removed, they could be more easily controlled, and a more normal shore bird activity could return. 19-13

(Page 7 of 41):

Baylands Mitigation Measure: The presence of Mercury in the Guadalupe has been known for well over 175 years. The material has been washed down from the mercury deposits in the mines upstream. The area in the Baylands should be treated in the same way that other areas in all of the Guadalupe projects have been treated. 19-14

(Page 25 of 41): As previously stated, the design and implementation of this project should include sediment and vegetation removal downstream past the County Marina. Strong consideration should be given to incorporating the County Marina into the overall design. I must point out that there is no effective and quick way to launch any rescue vessel into the south bay at this time. In the event of a airline crash, timely aid to the crash scene would be almost impossible. Rescue boats would have to be launched from Redwood City, and could take more than an hour to reach the area. The planned launch ramp is critical to public safety. 19-15

Page 41 of 41: The South Bay Yacht Club is situated at the corner of Hope and Catherine streets in the Alviso Historic District. Raising the levee even one foot will impair our view, but more importantly will cause the fill, as presently proposed, to be deposited and encroach on our property. Any raising of the levee must be done on the top and inboard section of the levee. 19-16

As a general note, the project states that raising the levees will be done on the outboard side of the levee. This may not always be practical and doing some inboard filling may be necessary as just stated. 19-17

While this EIR does not adequately address the proposal for a direct channel out through the salt ponds to the bay, it should be seriously considered. The plan to allow the salt pond to be filled with excess floodwaters in my opinion has some inherent flaws. In 1995 in March, two flood events in the 25-year category overtopped the levees and ran into the ponds. The salt ponds by their very nature are not designed as salt water flooding protection. To bring excessive floodwaters into these ponds are certain to weaken the levees that now exist. A combination of flood events, especially in the 100-year category could cause them to fail catastrophically and flood a significant part of the area around Alviso, Santa Clara, Sunnyvale and San Jose. The plan of adding weirs and pumps should be considered as only a temporary measure while the engineering, funding and permits are obtained to build the proposed channel. 19-18

No attempt has been made on commenting on each specific item in the EIR general text with which we are in disagreement. We feel, however, that our concerns are adequately expressed in the material above related to the Summary material.

The South Bay Yacht Club has existed in Alviso since before 1896 when we were officially formed after our initial organizing efforts in 1888. Our experience with the Guadalupe River therefore is significant. Our comments are therefore based on a close association with the changes brought about in the river over that extended period. We stand ready to assist in any way that we can to help in achieving a meaningful result when this project is completed. We have cooperated with the district in the two previous relocations, first in 1963, when we moved our docks across the river to make way for realignment, and again in 1983 with the relocation of our clubhouse. Both projects were completed to improve the flow and capacity of the river in front of our docks and clubhouse. This project, in our opinion, falls short of the expected goal, just as the previous projects did. 19-19

Sincerely submitted,

Russell H. Robinson, Staff Commodore
South Bay Yacht Club

Encl.: Letter, R. H. Robinson, SBYC to SCVWD Board dated 1/16/95

South Bay Yacht Club

16 January, l995

Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Dear Directors:

Last Monday, January 9, 1995; most of the citizens along the Guadalupe River were spared from significant flooding. Unfortunately, some were not so blessed, and were inundated when sections of the river overflowed its' banks. This did not have to happen if all parties to flood control could have accelerated the process of completing the Guadalupe project. A very significant lesson should have been learned this time that lack of progress resulted in suffering by the unfortunate.

It is time for all governmental and citizen groups to meet and resolve their differences when it comes to flood control of our watershed streams and rivers. Your group has achieved a great deal toward the flood control issue, but more is to be done and soon.

I have long been a watcher and participant in the flood control projects around the Alviso area, last working closely with your Board and staff after the 1983 flood. We, at the South Bay Yacht Club, Monday night, felt very fortunate, indeed, that the levee by the clubhouse had been raised after the '83 flood. We did, however, note that the water had little more room to rise as the riverbed was running near capacity. A most important thing to note here was that the highest runoff occurred at a time of a low tide. Would the banks have been breached if the time of peak runoff had occurred at high tide? What if the runoff had been up to the 100 year flood predictions?

We feel that there is still a major problem with the choked Guadalupe riverbed and the issue is not being addressed because the Alviso area project is considered complete. The problem, simply stated, is that in the past few years, due to the high fresh water outflow from the City of San Jose water treatment plant, a variety of brackish water bulrushes are growing in the watershed. These plants catch the mud, which is normally in solution in the salt water, and accelerate the silting process. This fills in the bottom faster than would be usual and reduces the outflow capacity. The old plants then seed new bulrushes and more siltation occurs.

If your Board would review the records, you will find that in 1967, when the South Bay Yacht Club moved its' mooring basin across the slough (at your request, due to a planned straightening of the riverbed), your staff promised 9 feet of water under our boat floats at mean low tide. The available water now for the boats using those floats has diminished to the point that they must time their activities around high or extremely high tides to even get out of their berths. This only serves to point out that the base of the riverbed has risen significantly and the ability of the river to carry water in this area has been greatly diminished. What is occurring, in my estimation, is that a funnel has been created, but the tip of the funnel is choked down. I see this occurring in all of the streams in the area, not just the Guadalupe.

The effectiveness of all the other flood projects along the rivers and streams that feed into the bay are in jeopardy unless this critical maintenance project of clearing the watershed is undertaken and soon. A strong policy of maintaining the capacity of what you build should be established, or if one exists, it should be followed, and it should be done now! The lives and property of those in the flood plane, as well as a huge electronics industry along the First Street corridor, are at risk. To delay can only spell disaster when another major flood occurs, and no one can predict when that will occur.

Members of the South Bay Yacht Club, as always, stand ready to assist your Board in any way we can. I, personally, would be happy to serve on any citizen advisory group or provide additional insight related to this critical issue. I can be reached at (408) 732-0320 (phone or fax). My home address is 10825 W. Estates Dr., Cupertino, CA 95014.

Sincerely,

Russell H. Robinson
Staff Commodore
South Bay Yacht Club

cc:
Susan Hammer
Mayor, City of San Jose
801 N. First Street
San Jose, CA 95112

Letter 20

Date: 10/12/01

From:
Robert W. Gross Ph.D.
RWG Associates & Consultants
c/o the Mudflat refuge
@ Union Warehouse - circa 1850
National Alviso Historic District
1200 Hope Street P.O. Box 55
Alviso, CA 95002-0055
Tel/Fax 408.263.4170

To: DAVE CHESTERMAN Fax + ______ copies sent

@ SCVWD Fax: 266. 6251

Message:

Response to E.I.R.

Thought for the day: When people say to you, "you're lucky," you say, "you are absolutely right, the harder I work, the luckier I get." The conclusion is, you make your own destiny, and if luck enters into the formula, that is so much the better, hmmm - what do you think?

An Overview of the Expected Physical Relationships Between the Intertidal and Shallow Bay Zones of the SF Estuary

by

Joshua N. Collins, PhD
San Francisco Estuary Institute
Richmond, California

for
The San Francisco Airport Expansion Workshop
11 January 2001
Oakland, California

Introduction

For the purpose of environmental management and scientific inquiry, the SF Estuary ecosystem of the Bay Area has conventionally been subdivided into three major landscapes: the bay, the baylands surrounding the bay, and the local watersheds.

> Going from deep to shallow water, the bay has been subdivided into three parts, the deep bay below the 3-fathom contour, the shallow bay between the 3-fathom contour and zero depth (i.e., the mean lower-low water datum), and the intertidal zone between zero depth and the maximum height of the Estuary.
>
> The term "baylands" is part of a regional lexicon for the Estuary. They are commonly considered to include the tidal flats (which comprise the lower intertidal zone), the tidal marshes (which occupy the middle and upper intertidal zones), and the diked baylands, which include all the areas that would be tidal if not for levees, tide gates, etc.
>
> There are many lesser categories of the bays and baylands, according to salinity regime, tidal hydroperiod, age, and type of substrate.
>
> The regional community of environmental managers and scientists has not adopted or developed a classification system for our local watersheds, although a variety of systems are available.

Scientific study of the SF Estuary ecosystem has been focused on the deep bays. The shallow bays and the baylands have received much less attention by scientists. Even less is known about the nature of the local watersheds. They are the least understood of the three major landscapes, although watersheds largely control the conditions of the baylands and the bay.

The relationships between the Estuary and its watersheds are gaining attention. The "bay scientists" and the "wetlands scientists" and the "watershed scientists" are starting to look to each other for help to explain conditions that they observe in the field. Successful large-scale efforts to restore any of these major parts of the system will require collaborative input from all three of these groups of scientists.

RWG Consultants & Associates
the MUDFLAT refuge
1200 Hope Street P.O. Box 55
National Historic District
Alviso, CA 95002.0055
tel/fax 408.263.4170

October 10th, 2001

Robert W. Gross Ph.D.

Santa Clara Valley Water District

RE: Draft E.I.R. Lower Guadalupe River - Public Hearing Tuesday Oct 2nd, 2001

The following is based upon my personal opinion. During my 30 year tenure and involvement in flood control issues, I have had the opportunity to serve as a public advisor to the United States Corps of Engineers under Charles Elmore, studying the San Francisco Bay levee protection. Also, as an former 20 year SCVWD Director, I represented this area, and it provided to me local experience, and the continue study of lower Guadalupe River.

To assume that the hydrology is faulted by siltation is only a half truth; the real failure is based upon upstream residential, commercial, and industrial growth, and this has forced the needs of additional storm water drains and pumping stations into the upper Guadalupe River. There have been decades levee confinement of prior historic tidal flows which existed in the South Bay delta. We have seen continual changes in environmental constraints, subsidence, questionable Federal/State agency regulations, massive growth of non-indigenous aquatic vegetation, the lack of local knowledge and experience in this area, and the failure of routine channel maintenance for what ever reason.

We have ignored, and we have been a witness to the introduction of millions of gallons of fresh water from existing waste water treatment plants dumping direct into the sloughs, this action has created fresh water aquatic vegetation which clog, become silt collectors, forces stagnation and restricted the normal tidal flows. These actions not only changed the salinity of the waters, including the destruction of natural plant life, habitat areas, and caused wildlife endangerment. Examination of recent aerial photography will validate this statement.

These are only a few of the many examples of why, and there is no single cause, they all have made their contribution by restricting not only high flood flows, this united action has choked and curtailed the historical tidal action from Tasman Avenue bridge to the entrance into the bay.

- The potential economic loss ratio should be required to be re-evaluated. To make a statement that area during excessive storms, damages could reach ½ billion dollars is misleading the public. Common sense, and knowledge of the electronic and industrial area would tell the average individual that this figure is in the billions of dollars. The loss quoted in the hearing would only cover one building, let alone the billions of dollars in roads, infrastructures, transportation (light rail), marketing/sales, the ability of workers ingress-egress to their employment/wages, causing plant closures, are only some of the many examples which need to be re-examined. 20-1

- Clarification is needed in reference to wildlife and habitat areas. When reviewing older photographs, personal knowledge of the Guadalupe River, it is clear, that the new aquatic vegetation is not indigenous to the waters in this region. Limited discussion was made as to salty water conditions, looking at historic data, the introduction of fresh water out-flows were introduced from the waste water treatment plants into the southern end of the San Francisco Bay, making a total change in the environment, hydrology, habitat, vegetation, shore bird feeding etc., all have been seriously impacted by the neglect of routine maintenance, and siltation is a result - not a cause! 20-2

- In the future, it is my personal opinion, that all permitting agencies/parties to this E.I.R., should be required to be at all public hearings, rather than leaving the water district to respond or defend permitting agencies to hypothesize on what is -"is?" 20-3

- To the hundreds of thousands of vehicles which travel Highway 237 west, why not propose that the United States Corps of Engineers (military personnel) put in a temporary by pass bridge around the construction area during the construction of a new bridge over the Guadalupe River during the summer months (low flows). If not, this area will be a transportation disaster. 20-4

- There is a serious difference of opinion on future cfs's during a major storm, and the control of the 18+/- mechanical pumps upstream from the UPRR in Alviso is under attack by the community. The public has absolutely no faith or trust in the proposed pumping controls during peak flows by a governmental agency. 20-5

- There was confusion by the public as stated during the hearing, pumps will be placed to remove waters from old salt evaporators for wildlife habitat, but what provisions were being made for additional pumps in the community of Alviso? 20-6

- What discussions have been made with the salt company using their salt evaporation ponds as a flood plain, this would introduce foreign waters and cause damages? The new channel would provide this protection to the salt company, establish new wetlands, the return of shore bird feeding, and increase the hydrology in this region during all seasons. It would give a much needed healthy fish habitat restoration that has been destroyed by lack of reasonable flows and tidal action. 20-7

- I have serious questions in reference to Figure 4-4 Conceptual options for a new channel construction from UPRR to the San Francisco Bay. How could district staff and the consultants evaluate the proposal, when not one person took the time individually to discuss the proposal in detail with the author of this proposal, or where is the support or participation from other agencies for financial support? What discussions were made with the salt company and impacts to their product? It is clear, from the E.I.R., this concept is not understood by the participants to this draft report. Again, it is my personal opinion, temporary and costly fixes are not the answer, when all agencies note how successful lower Coyote by-pass has allowed heavy peak flows to travel through highly developed residential, commercial and industrial areas, learn by example. 20-8

[illegible] in the channel basin. Be assured, a mountain of paper work will not hold back flood waters [illegible] opinion, It is far less expensive to do a job right the first time, than continuing in a costly patch meal job in the future. Let us not think this is sand lot baseball, become a player in the major league, it is time to become creative like the district has the ability and the skills to do so

In closing, "do not let this become the district's achilles heel, for this will become your vulnerable location, if not properly executed!"

Robert W. Gross Ph.D.

cc: SCVWD Director Richard Santos, District 3

With Attachments

Santa Clara Valley Water District

ROBERT W. GROSS, Ph.D.
DIRECTOR DISTRICT 3

5750 ALMADEN EXPRESSWAY
SAN JOSE, CALIFORNIA 95118
TELEPHONE (408) 265-2800

November 2000

WHITE DRAFT PAPER

RE: Proposal for flood protection Lower Guadalupe River
South San Francisco Bay - Santa Clara County

For a number of years (30+), I have had the opportunity to examine the lower San Francisco Bay, with its fragile levee system from Palo Alto to Milpitas. This paper is focusing (along the bay frontage) from the eastern side of NASA/Lockheed's complex, to the western side of lower Coyote, and remains a problem to Santa Clara County's existing infrastructures and developed areas. I am convinced today, this area is vulnerable, and why there are potential flooding damages, if action is not taken soon.

The existing infrastructures (storm water pumps-see attached) in North San Jose, combined with future flows during a 100 year flood in the upper reaches of the Guadalupe River, will only compound the problem, from North of Hwy 237 to the San Francisco Bay in the Alviso area. There are additional pumps which have not been discussed, such as; Cisco System's new project on North 1st Street and Highway 237, Legacy's development at the Gold Street bridge, and the new industrial development on the southern side of Hwy 237and North First Street (totaling nearly 3,000,000+/- sq. ft. of new buildings), cannot be ignored.

It is evident from past experiences, and engineering principles, lower Guadalupe will be incapable to handle this increased capacity from Tasman Avenue to the San Francisco Bay, Calabazas, the high tides, and the low bridges, become debris/trash collectors during heavy storms, and they must be factored into the flooding formula.

During the last decade, the hydrological flows have become complicated in the lower reaches, due to delays from various agencies, which prohibit the water district's ability to do routine maintenance, environmental constraints continue to be introduced, such as; heavy metals in the soils/siltation, and the uncontrolled growth of non-indigenous aquatic vegetation, have literally choked the waterways in this area, destroyed shore bird feeding, changed the environs, and are restricting the historic tidal flows.

It is also my opinion, this is an inter-agency problem, and should be supported by a financial contribution by others for a solution. SCVWD is not the lone benefactor. Urban and industrial expansion, continues to be a conflict between flood control, mitigation, and environmental enhancement in the "Golden Triangle," and it is clear action must be taken.

Again, there should be a financial resolve by others, and they should be part of the solution, due to their impacts with increased flood waters, the environs, vehicular traffic congestion, and all should share in the costs (percentage) of a new channel via an agency powers agreement, and help mitigate many problems facing its citizens (please see attached drawing directly through the existing salt evaporators to the S. F. Bay).

By going direct to the San Francisco Bay via the salt evaporator ponds, starting at the SPRR bridge in Alviso, the channel as proposed, would not disturb existing wildlife habitat, aquatic vegetation, or stimulate the heavy metals in the existing waters. The concept would help establish the historical tides, by removing the older salt evaporator dikes along the Calabazas Creek, and the Guadalupe River, allowing environmental habitat restoration, historic shore bird feeding, and yet be capable of carrying large volumes of flood waters. Some of those listed below, will directly benefit from protective flood control, while others indirectly enjoy the multi uses with a new channel (creating a delta).

As a society, we can no longer afford a road as a road, a park as a park, a flood control project as a single purpose, all pubic officials, and all governmental agencies, must incorporate them into one where ever possible, if we are to be successful in the work place, the environment, and a healthy life style.

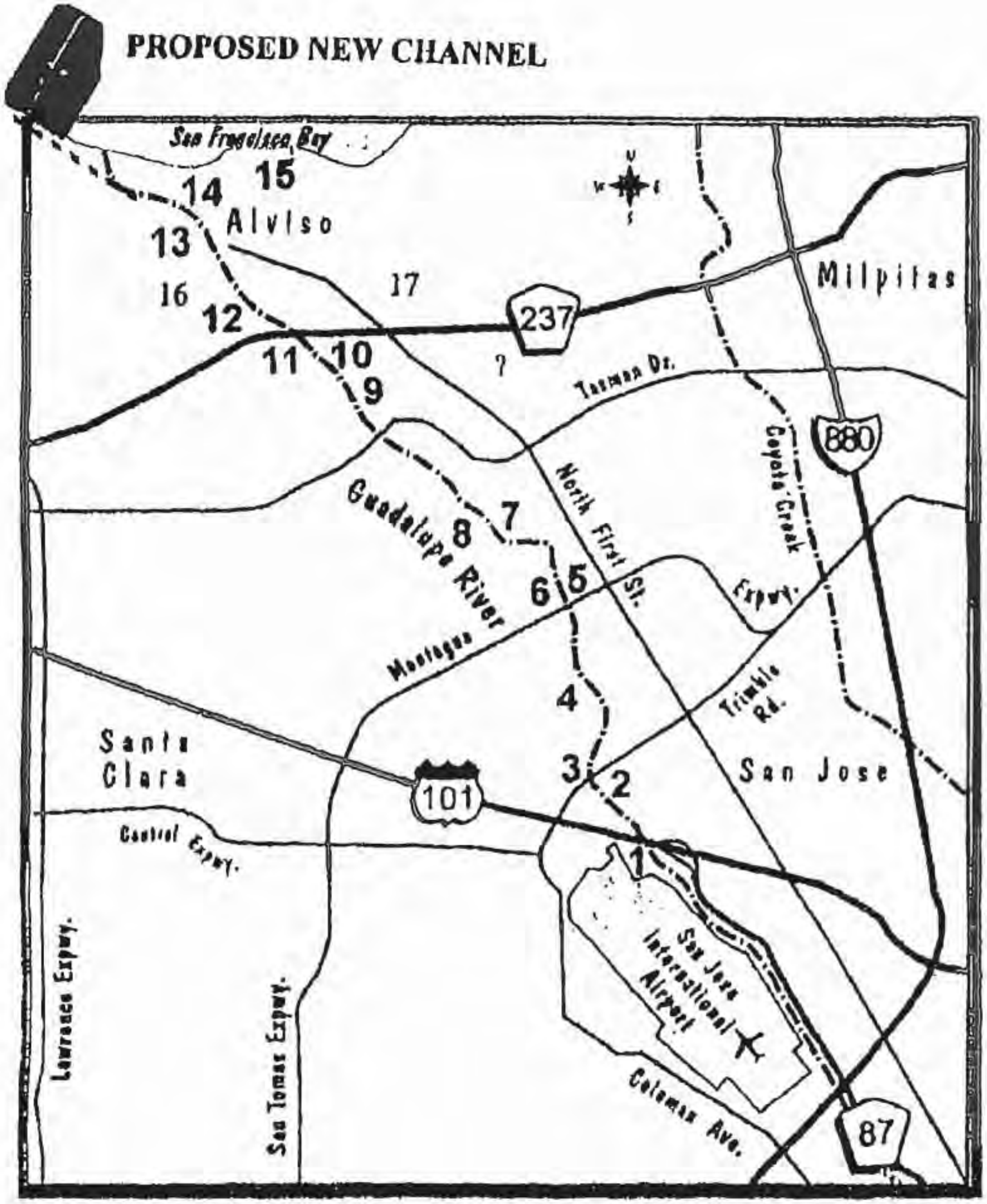
Examples of participants (but not limited): Congress of the United States, US Corps Engineers, DWR State of California, re-development agencies, Santa Clara County, Alameda County, San Mateo County, County of San Francisco, City of San Jose, City of Santa Clara, CAL Trans/Roads, environmental groups, public trails, light rail, trains, public other ground transportation, State of California Bay Area Council Water Transit Initiative Action Plan (restore passenger/freight ferry boat operation in Alviso), San Francisco & Oakland Airport expansion & mitigation, DMV Water Craft Recreation and Boating.

I strongly recommend and encourage, that this proposal become a priority now, time is of the essence, or the public will suffer because of lack of leadership or the ability to resolve.

Very truly,

Robert W. Gross Ph.D.

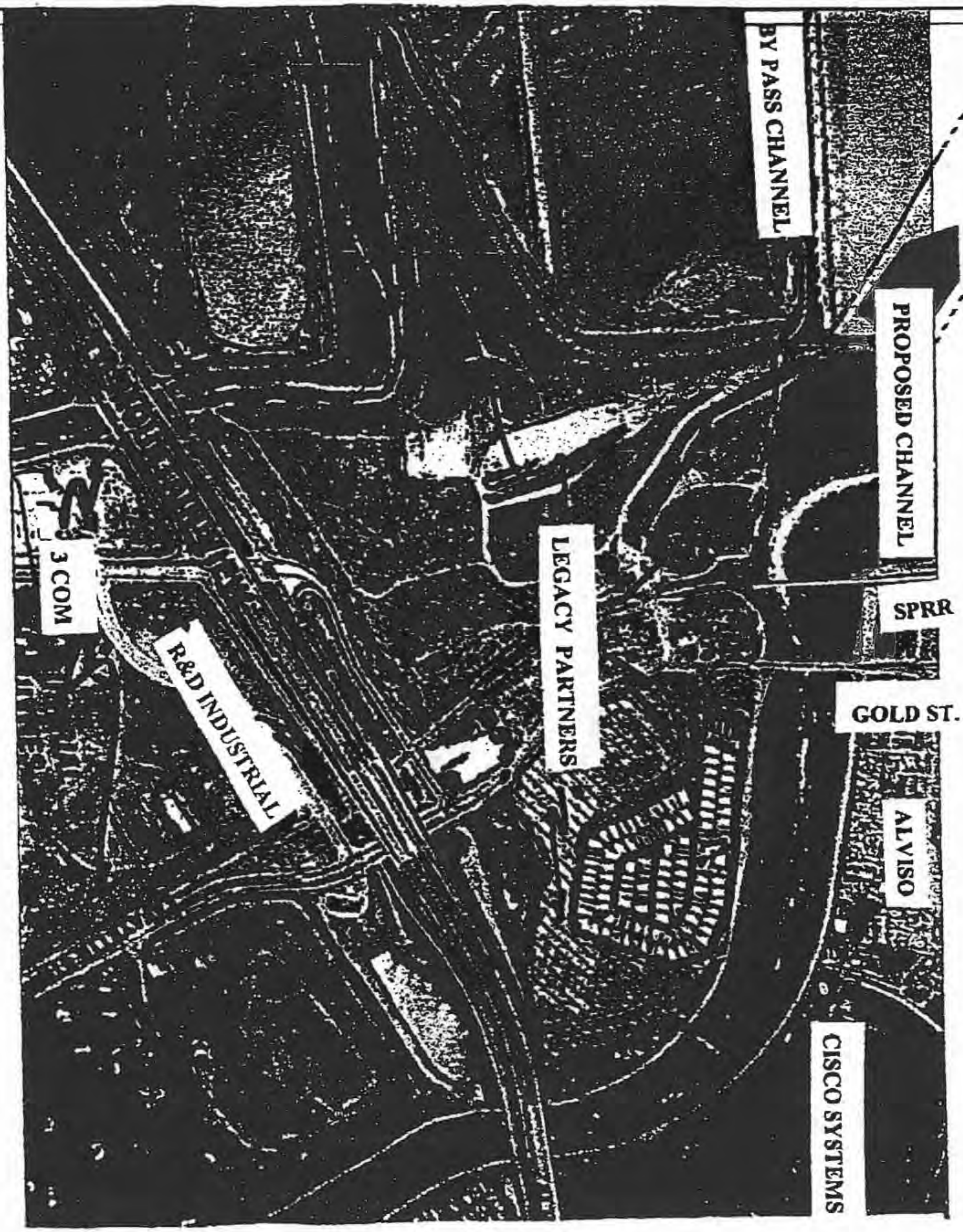
Attachments: Support materials & Draft White Papers October 98-November 98-February 99

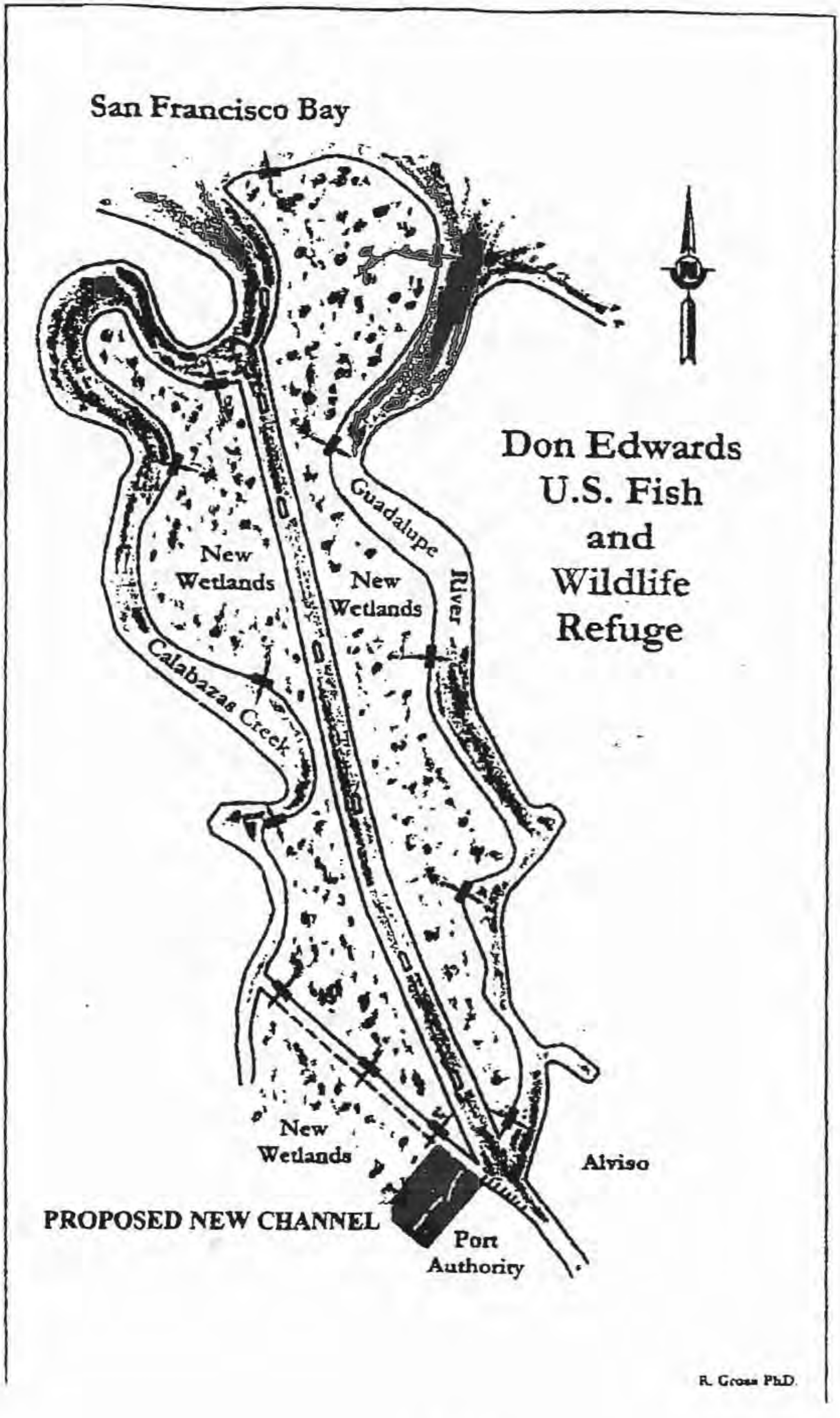


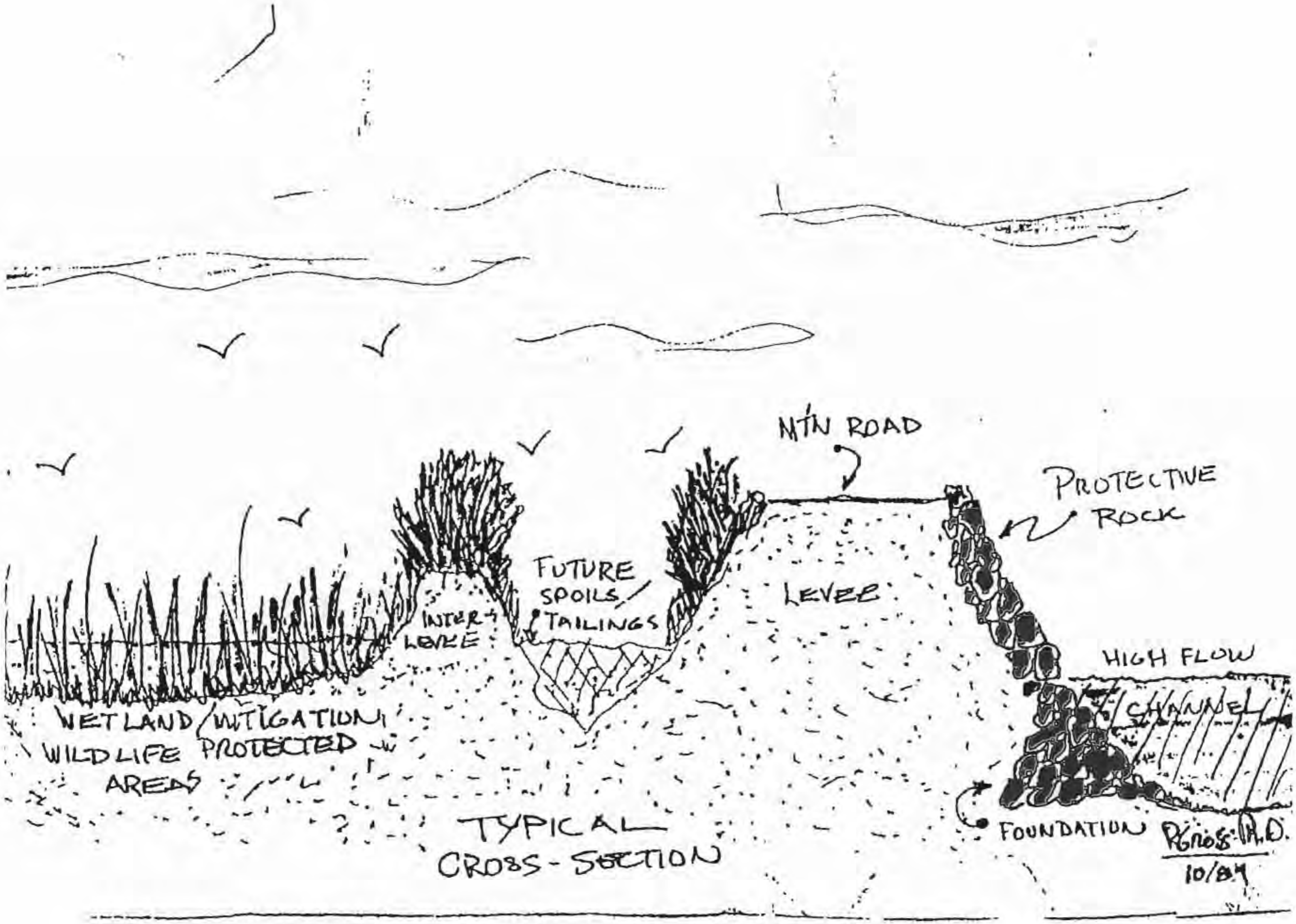
PUMP STATIONS IN NORTH SAN JOSE

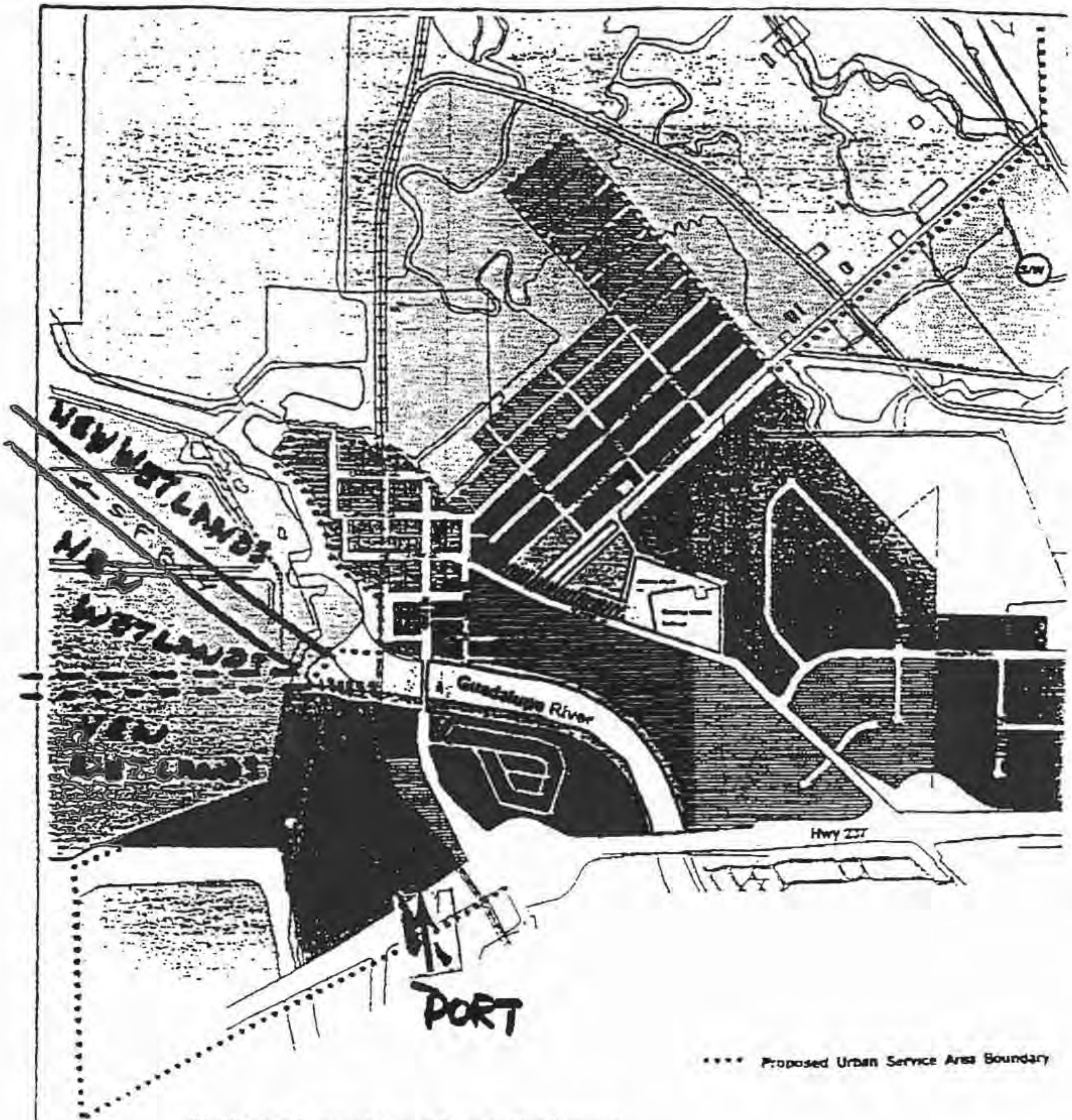
1	AIRPORT	50CFS
2	GATEWAY	7
3	LAUELWOOD/VICTOR	131
4	NELO/VICTOR	60
5	RICON	360
6	LICK MILL	234
7	RIVER OAKS	67
8	FAIRWAY GLEN	247
9	OAKMEAD	735
10	OAKCREST ESTATES	12
11	EAST SIDE	111
12	SUMMERSET	21
13	LIBERTY	.02
14	ELIZABETH/GOLD ST.	45
15	NEW CHICAGO MARSH	1.5
	"IMPACTS UNKNOWN"	
16	LEGACY DEV. GOLD ST.	?
17	CISCO SYSTEMS 1ST ST.	?
18	NEW INDUSTRIAL DEV.	?

R Gross Ph.D.


BY PASS CHANNEL
PROPOSED CHANNEL
SPRR
GOLD ST.
ALVISO
CISCO SYSTEMS
LEGACY PARTNERS
R&D INDUSTRIAL
3 COM


San Francisco Bay
Don Edwards
U.S. Fish
and
Wildlife
Refuge
Guadalupe
River
New
Wetlands
New
Wetlands
Calabazas Creek
New
Wetlands
Alviso
PROPOSED NEW CHANNEL
Port
Authority
R. Gross PhD.


MTN ROAD
PROTECTIVE ROCK
FUTURE SPOILS/TAILINGS
INTER-LEVEE
LEVEE
HIGH FLOW
CHANNEL
WETLAND/MITIGATION/WILDLIFE PROTECTED AREAS
FOUNDATION
TYPICAL CROSS-SECTION
R Gross Ph.D.
10/84



City of San Jose, Department of Planning, Building, and Code Enforcement,
Planning Services Division

TASK FORCE PREFERRED ALTERNATIVE PLAN

But the dialogue is new and there are many basic questions still unanswered. For example, we have pretty good maps of the bathymetry of the bay and of its tidal flats and marshes, but we lack maps of the substrates of all the deep bay and we lack comparable maps of all of our watersheds. We know more about the movements of sediment within the bay than where the sediment comes from. We know from other regions that tidal marshes are important as habitat for estuarine and anadromous fishes, and that tidal marshes serve as filters that remove sediment and pollutants from the water. But we are just beginning to try to measure these marsh functions in this region.

Against a backdrop of uncertainty, I have agreed to provide a brief overview of some of the expected basic physical relationships between the deep and shallow parts of the estuary and its local watersheds, with a focus on relationships between the intertidal zone and shallow bays.

My two take-home messages are as follows.

1. **The bays, baylands, and local watersheds have been disengaged from each other because the connecting channels have been destroyed.** The sum total of what is now known about the three landscapes of the region is that they have been disconnected from each other by the deterioration of the creeks and sloughs and subtidal channels that used to run between them, such that each of these three landscapes is not well supported by the others and the system as a whole is therefore failing.

   For example, the natural ecology of the shallow bays and deep bays depends on tidal marshes as sources of nutrients and carbon, and the marshes served as habitats for bay fishes and other wildlife. The tidal marshes depend on inputs of nutrients and sediment from local watersheds. But most of the tidal marshes have been isolated from the tides by reclamation. Furthermore, the remaining marshes have become disconnected from their watersheds because the creeks that used to drain to the marshes have been diverted or consumed, or they are choked with sediment upstream of bridges and culverts that are too small in cross-section to convey the sediment that comes directly from the watersheds. Simply stated, our railroads, highways, and buried utilities that surround the Estuary have at least partially dammed our creeks for fish and water and sediment, and thus separated the tidal marshes from their local watersheds. At the same time, the tidal parts of the creeks and the tidal sloughs have severely shoaled and narrowed in response to the loss of tidal prism due to tidal marsh reclamation. All of the channels that used to connect the tidal marshes and the tidal flats to the shallow bays and deep bays have become foreshortened and many of them have become filled with sediment that comes directly from the bays.

2. **The restoration of the shallow bay landscape depends on the restoration of the intertidal zone.** A restored intertidal zone, including the tidal reaches of the local watersheds as well as the tidal marshes, is required to restore and naturally maintain the channels that connect the shallow bays and deep bays to the intertidal zone and the local watersheds. Furthermore, the restoration of large areas of tidal marsh will create shallow bay habitat in the form of very large channels that innervate the marshlands but do not completely drain during low tide.

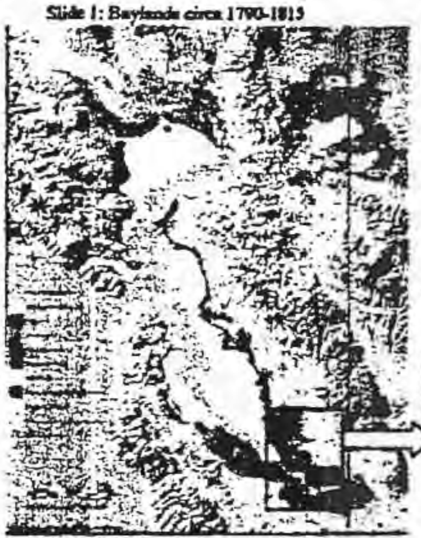
   For example, the ribbons of marsh that wind their way among the salt ponds and other diked baylands of South Bay and North Bay used to be shallow bay channels hundreds of feet wide and miles long. The main channel of Coyote Creek included more than 400 acres of shallow bay habitat. The larger tributary sloughs comprised another 100-200 acres of shallow bay. In addition, all of these channels also included tidal flat. When the marshes were reclaimed, the channels naturally adjusted to the loss of tidal prism by shoaling and narrowing. As they filled with sediment, they evolved from shallow bay to tidal flat, and then from tidal flat to tidal marsh. We now have narrow corridors of tidal marsh where we used to have shallow bay channels. To restore the channels, the adjacent areas of diked baylands must be returned to the tides.

Definitions

SLIDE SET 1: Regional and South Bay EcoAtlas Historical Views

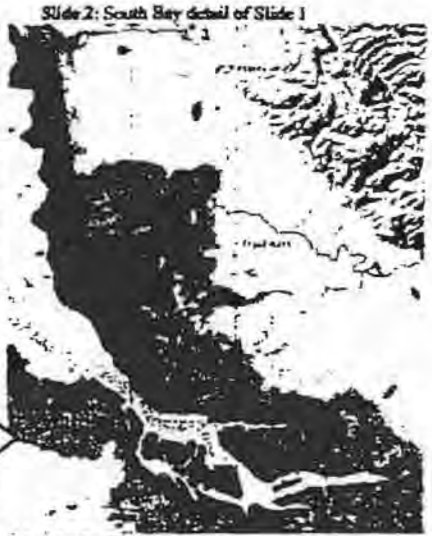
The historical view of the ecosystem provides a useful template for starting a discussion of the connections between the bays, wetlands, and watersheds because it shows where the connections tend to exist, due to climate and topography that have not changed since historical times.

Slide 1: Baylands circa 1790-1815



Map Credit: SFEI

Slide 2: South Bay detail of Slide 1



Map Credit: SFEI

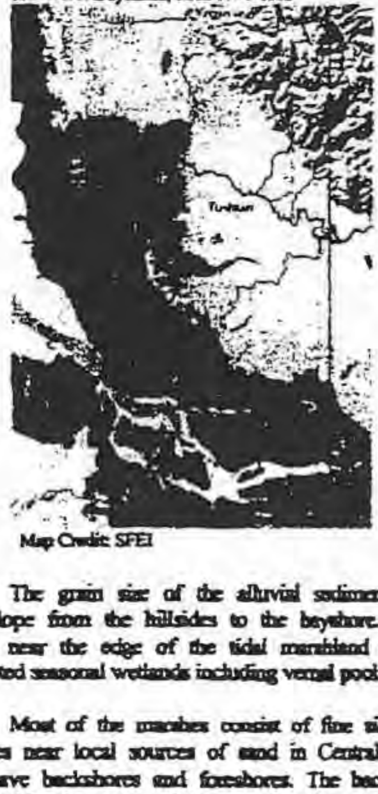
Here we see the spatial relationships among the three major landscapes and their major habitat components of the historical bay ecosystem. The map on the left shows the region prior to European contact. The map on the right is a close up of part of South Bay. The upper watersheds that surround the Estuary lead downslope to broad alluvial plains that lead to tidal marshes (shown in yellow-green), which lead to tidal flats (shown in brown) and then shallow bay habitats that surround the deep bay (shown in lighter blue and darker blue, respectively).

The intertidal zone extends between maximum high water and minimum low water, and includes the tidal marshes and tidal flats. Note that we are not talking about the tides alone, but all the factors such as wind and rain and runoff and air pressure and the shape of the bay that contribute to water "level" or water "height", relative to the land. The shallow bay zone extends between minimum low water and the 3-fathom (i.e., minus 18 ft) deep contour. Zero depth corresponds to the average height of the lower low tides. The deep bay zone extends below the 3-fathom contour.

Basic Characteristics

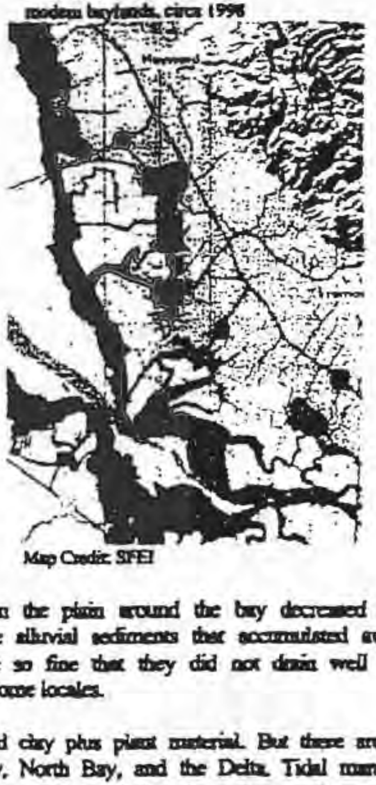
SLIDE SET 2: South Bay EcoAtlas Historical and Modern Views

Slide 3: Detail of South Bay
Historical Baylands, circa 1790-1815



Map Credit: SFEI

Slide 4: Detail of South Bay
modern baylands, circa 1998



Map Credit: SFEI

The grain size of the alluvial sediments on the plain around the bay decreased with distance downslope from the hillsides to the bayshore. The alluvial sediments that accumulated away from the creeks near the edge of the tidal marshland were so fine that they did not drain well and therefore supported seasonal wetlands including vernal pools in some locales.

Most of the marshes consist of fine silt and clay plus plant material. But there are some sandy marshes near local sources of sand in Central Bay, North Bay, and the Delta. Tidal marshes and tidal flats have backshores and foreshores. The backshore of a marsh is where the marsh transitions to the upland. The foreshore of the marsh and backshore of the tidal flat are the same, and correspond to the transition from tidal flat to marsh. The foreshore of the tidal flat corresponds to the transition from tidal flat to shallow bay. All of these transitions are physical zones rather than discrete lines, and they are ecologically fuzzy.

The shallow bays have many types of substrate, including silt and clay ("bay mud"), sand, shell hash, and bedrock. The tidal flats have the same bed types as the shallow bays, except they lack bedrock. Artificial shorelines, such as riprap and seawalls, usually exist where tidal flats would otherwise transition to tidal marshes.

SLIDE SET 3: photos of tidal marsh showing its physiography

Slide 5: IR photo of Petaluma Marsh plain detail

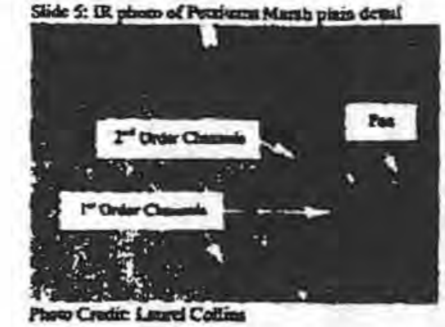


Photo Credit: Laurel Collins

Slide 6: IR photo Montezuma Slough Marsh detail

Photo Credit: Josh Collins

There are many types of tidal marsh: low marsh that gets wet on almost every high tide; middle marsh that gets wet on most high tides; high marsh that gets wet during only the highest tides each month; young marsh and old marsh; natural marsh and restored marsh; broad marshes between creeks and narrow fringe marshes along creeks and shorelines; and there are marshes of different salinity regimes. But the basic features of tidal marshes are the foreshore, backshore, marsh plain, tidal pans, and tidal channels large and small. Tidal marsh channels get larger with distance toward their connections to the bay.

SLIDE SET 4: photo of tidal flat

Slide 7: *East Bay mudflat*

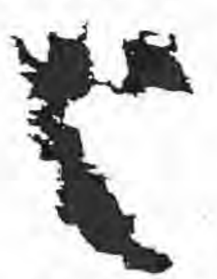
Photo Credit: Josh Collins

We know much less about tidal flats than about tidal marshes. We know that they slope toward the shallow bay zone. Narrower flats slope more steeply. There is less tidal flat under less saline conditions because tidal marsh plants grow lower in the intertidal zone under fresher conditions. Under freshwater conditions, there is marsh where there would otherwise be tidal flat. This is part of the explanation for less tidal flat in Suisun than in North Bay, and less in North Bay than in South Bay.

Tidal flats have channels, and the larger of these can have natural levees. But most of the channels do not completely cross the tidal flat. They begin near the transition to marsh and end before they reach shallow bay.

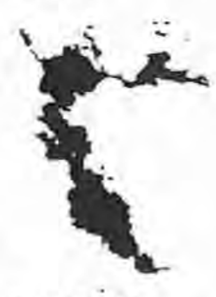
As we will see later, whether or not a channel extends from marsh across the tidal flat to bay probably has important consequences for the relationships among these places, and is controlled in large part by the conditions of the tidal marsh and local watersheds.

Historical Changes in Distribution and Abundance
SLIDE SET 5: Pairs of past and present maps of extent of high tide and baylands



Slide 8: High tide
circa 1790-1815

Map Credit: SFEI



Slide 9: High tide
circa 1998

Map Credit: SFEI

Slide 10: filled areas
circa 1998

Map Credit: SFEI

Slide 11: diked areas
circa 1998

Map Credit: SFEI

In the Estuary downstream of the Delta, there used to be about 240,000 acres of intertidal zone, with about 190,000 acres of tidal marsh and 50,000 acres of tidal flat. Now there are only about 40,000 acres of marsh and about 29,000 acres of tidal flat. There used to be about 174,000 acres of shallow bay, and 100,000 acres of deep bay. There is still about the same amount of shallow bay, but only about 82,000 acres of deep bay.

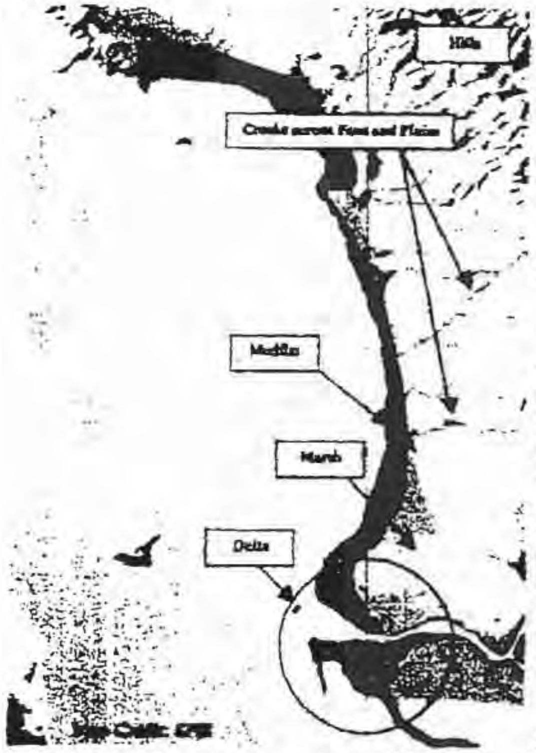
Land development and an increase in sedimentation in the intertidal zone due to an increase in watershed erosion have shifted the intertidal zone and the shallow bay zone toward the deep bay. Agriculture, salt production, and urbanization have replaced tidal marsh and some tidal flat. New tidal flat has formed at the edges of shallow bay, and some of this new tidal flat has evolved into tidal marsh, and new shallow bay has formed at the edges of deep bay. Simply stated, all around the bay, the upland grasslands, tidal marsh, tidal flat, and shallow bay habitats have shifted toward the deep bay.

The Estuary has become smaller in aerial extent and volume but there is still about the same amount of shallow bay. The reduction in area and volume of the estuary is mostly represented by the loss of tidal marsh and tidal flat.

Basic Physical Processes
Slide Set 6: Main Landscapes and their Elements

Tidal marsh is transitional from upland to tidal flat, and tidal flat is transitional from marsh to shallow bay, and shallow bay is transitional from tidal flat to deep bay. The line between deep bay and shallow bay is somewhat arbitrary, although these zones have different ecological and geomorphic characteristics. In fact, the lines between any of these landscapes or zones are fuzzy when viewed through ecological and physical processes.

Slide 12: Historical view of east side of Central Bay circa 1795-1815



Looking bayward from the local watersheds, we can see active deltas at the mouths of most creeks, where they enter the intertidal zone, and at the lower limits of the tidal flats, where the creeks and sloughs leave the intertidal zone and enter the shallow bays. The creeks and sloughs were actively building the alluvial plain, tidal marsh, tidal flat, and shallow bay by deposited sediment from the local watersheds.

Looking landward from the deep bay, we can see that the tides and currents move fine material from shallow bay into tidal flats. The grain size of this material decreases with distance landward, or upslope, toward the backshore of the marsh.

Thus, the alluvial sediments decrease in size with distance downslope from the upper watersheds to the tidal marshes, and the estuarine sediments decrease in size with distance upslope from the deep bay to the tidal flats and tidal marshes.

The movements of sediment as well as water from the watersheds to the bay, and from the bay to the marshes, were essential processes that connected one landscape to another and maintained the physical system as a whole. The tidal marshes occupy the middle reaches of these processes. They truly are transitional landscapes between watersheds and the bay.

The lateral extent and slope of the flats change seasonally and perhaps more often than that. Sediment is re-suspended from shallow bay and tidal flat by wind-generated waves and some of this sediment is transported further shoreward, toward the tidal marshes. But the residence time of this material in either zone is not known. And its origin is not known, except that it is derived from watersheds that drain into the estuary.

Of increasing interest is how the contributions of sediment into the intertidal zone and shallow bay zone from local watersheds might increase with distance upstream along slough and creeks that drain those watersheds. Simply stated, the importance of a local watershed as a source of intertidal sediment and water increases with distance upstream into the watershed.

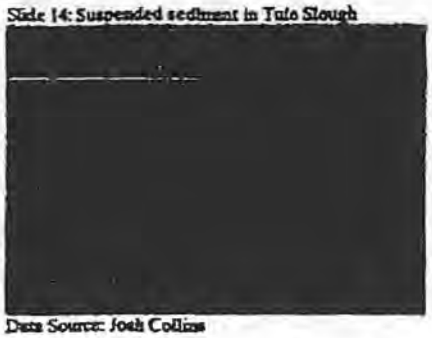
Some of the sediment that is re-suspended from the shallow bay and tidal flat is transported into the tidal marshlands, and most of that is retained there. Under conditions of stable or rising sea level, tidal marshes are for the most part permanent sediment sinks.

SLIDE SET 7: Marsh Processes

Slide 13: IR photo of Petaluma Marsh plain detail

Photo Credit: Laurel Collins

Slide 14: Suspended sediment in Tolo Slough



Data Source: Josh Collins

Let's look more closely at the "filtering" function of tidal marshes. On the left we see an aerial view of tidal marsh showing its structure as a filter, with channels large and small innervating the marsh plain. On the right we see a set of data for suspended sediment concentration during one rising tide that did not overtop the banks of the channel anywhere from its connection to the tidal flat to its terminus near the backshore of the marsh plain. Although this tide never got above the channel banks, the concentration of suspended sediment decreased as the tide moved upstream through the channel system.

In this example, where the water level never rose above the channel banks, the loss of suspended sediment means that the sediment was being deposited along the channel bed. But repeated measurements of the length of this channel system and of its cross-section show that that the channel has not changed in dimension. This means that the sediment that is deposited on the bed during flood tide is re-suspended by the ebb tide. How often the sediment is exchanged between the tidal marsh channel and the adjacent tidal flat or shallow bay is unknown. But obviously some sediment, and presumable some water, is washing back and forth within the marsh channel system for some length of time.

Slide 15: Schematic of tidal marsh channel system

Source: Josh Collins

This schematic shows the channel system as sediment decanter. As the water rises into a channel, it slows due to the friction, and the flow becomes less turbulent. The suspended sediment begins to settle to lower parts of the water column. The lower layers of water move upstream through the channel slower than the upper layers because of friction at the channel bed. The clean upper layers of water stream forward into the tributaries before the sediment-laden water. In very long channels, the sediment-laden water may not reach the end of the system except on very high tides.

Channels achieve a "dynamic equilibrium" between their size, shape, and the average supplies of water and sediment. Unless these supplies change, the channel does not significantly change size, which means that the sediment and water that comes in during the flood tide and that does not go onto the marsh plain must go back out of the channel during the ebb tide.

Slide 16: Profile of sediment core transect

Data Source: Josh Collins

But some tides are high enough to carry sediment unto the marsh plain. Here we see a set of shallow cores of marsh sediment taken along a transect that extended onto the marsh plain from the edge of a channel. The amount of suspended inorganic sediment that is carried by the tides from the shallow bay and tidal flat onto the marsh is mostly trapped within 30 feet or less of the channel banks. As we move farther away from the channel bank, the marsh sediment becomes increasingly organic, and this organic sediment is created in place by plant growth; it is not filtered from the tides.

This means that most of the filtering action of the marsh is conducted within the marsh channel system and its immediate margins.

The marsh also provides a way for the tides to dissipate their energy. As the rising tide moves across the tidal flat and into the tidal marsh channels, or out of the channels and onto the marsh plain, it is slowed by friction. The tidal flat and marsh can damp the tidal wave and reduce its energy. Marshes "soften" the shoreline of the estuary and thus we expect them to reduce the amount of shoreline reflection of the tidal wave. Recent findings suggest that large-scale tidal marsh restoration may reduce the size of the standing waves or seiches that occur at the mouths of our local rivers and streams and throughout the South Bay and elsewhere in the Estuary.

Let's summarize this part of the overview.

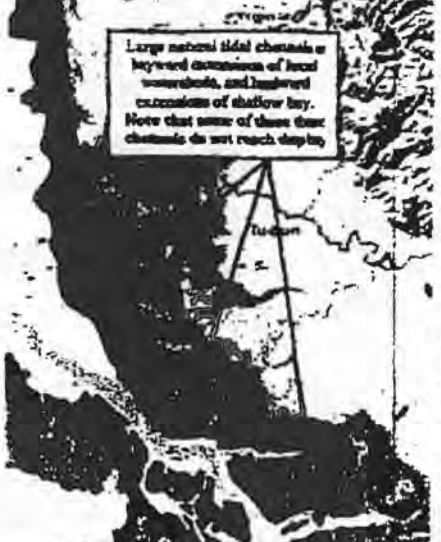
Watersheds convey water and sediment through rivers and streams and into tidal marshes, tidal flats, and shallow and deep parts of the bay.

Some of this sediment, especially the very fine-grain sediment that reaches the shallow bay, is transported by the tides and wind-generated waves from the shallow bay into tidal flats and from the flats into tidal marsh.

Channels facilitate this physical relationship between watersheds, wetlands, flats, and the bay.

Some of the channels extend throughout the system, from watersheds to deep bay, and other channels do not. The ones that go all the way from watersheds to deep bay wind through the intertidal zone, directly connecting all three of the major landscapes. Tidal marsh channels that do not extend completely across the tidal flat or through the shallow bay serve to connect the shallow bay to the intertidal zone, at least during high tide. Channels that extend from watersheds to the intertidal zone but not to the bay provide important connections between the intertidal zone and watersheds. In any case, channels are the dominant pathways of ecological and physical processes that link together the watersheds, wetlands, and bay landscapes.

Slide 17: Detail of historical view of South Bay


Large natural tidal channels = bayward extensions of local watersheds, and landward extensions of shallow bay. Note that some of these that channels do not reach deep bay.

Map Credit:

There are many examples of habitats that depend upon these connections. For example, the largest expanses of tidal marsh, tidal flat, and shallow bay tend to develop in association with medium size watersheds having large sediment loads but inadequate discharge to maintain a channel all the way across the tidal flat and though the shallow bay into deep bay.

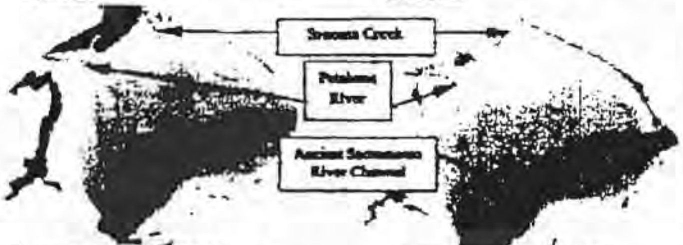
In this historical map, we see many channels that lead from medium size watersheds through tidal marsh and into tidal flat. We can see that the tidal flat is building outward, or bayward, into the shallow bay at the ends of the channels. What we are looking at is the process of natural creation and self-maintenance of tidal flat and shallow bay as critical habitat for many species of shorebirds and fishes and other wildlife. This process depends upon the channel connections between the intertidal zone and the shallow bay, and between the watershed and intertidal zone.

Close study of this estuary and others clearly shows that under natural conditions the larger tidal channels are very stable. There is apparently, and as expected, a balance between water supply and sediment supply that determines the extent of channel connection between the estuarine zones. Again, if the average supplies of sediment and water do not change, then the larger channels remain about the same. But an increase in sediment or a decrease in water tends to cause channels to shoal and shorten. Again, the loss of channel connections can disengage one major landscape from another, and thus significantly and negatively affect the ecosystem as a whole.

SLIDE SET 8: USGS bathymetric study of San Pablo Bay changes.

Slide 18: San Pablo Bay bathymetry Circa 1850

Slide 19: San Pablo Bay bathymetry circa 1900



Source: Richard Smith, USGS

Source: Richard Smith, USGS

For example, in this set of slides we see the historical loss of shallow bay channels that connected Sonoma and Petaluma watersheds to the deep part of San Pablo Bay. Reclamation of tidal marsh greatly lessened the tidal prism for Petaluma, Sonoma, and Napa streams and thus reduced their ability to maintain the portions of their channels that lead across the tidal flats and shallow bay to the deep bay. At the same time, a flood of sediment from hydraulic mining in the central Sierra choked the filter. The Sonoma channel is completely gone and the other channels are maintained by routine dredging.

Slide Set 9: Interpretation of Salt Ponds

Slide 20: Oblique aerial photo of South Bay salt ponds

Salt Ponds with historical channels
Levees
Tidal Marsh Replaces Historical Shallow bay Channels

Photo Credit: Mike Monroe, USEPA

Slide 21: Orthogonal aerial photo of salt ponds

Photo Credit: Mike Monroe, USEPA

Here we see two aerial views of salt ponds in South Bay. Notice that the levees around the ponds also demarcate the historical banks of the largest tidal marsh channels. When the marshes were reclaimed, the channels shoaled and narrowed, such that there is now marsh between the levees, were there used to be shallow bay channel and mudflat.

The volume of tidal water that is represented by large amounts of tidal marsh clearly affects the length and width and depth of channels that connect watersheds to deep bay, and tidal marsh to tidal flat, and tidal flat to shallow bay. Restoring tidal marsh means restoring the tidal prism that is necessary to maintain these connections.

It is important to emphasize that the largest of the tidal marsh channels, such as the ones that used to exist between the large areas of diked marsh is South Bay and that have since evolved into marsh, were deep enough that they did not de-water during low tide. They actually functioned as landward extensions of shallow bay. Tidal marsh restoration, if undertaken at a large enough scale, will also restore shallow bay, and the critically important physical and ecological interactions between the shallow bay and intertidal zone.

Conclusions

In this brief talk, I have emphasized the importance of restoring the lower reaches of local creeks to protect tidal marshes, and the importance of restoring tidal marshes to protect shallow bays. I have not talked about diked baylands because they lack direct and continuous connections to the intertidal zone or shallow bay zone. Diked baylands can be managed to store flood waters, retain or release salt, or to reduce the tidal prism, but they do not serve to maintain the physical system of channels that connect together the watersheds, tidal baylands, and the bays. It should be noted, however, that diked baylands have important ecological functions as seasonal wetlands that also need to be protected. Ideally, large amounts of seasonal wetlands could be restored as diked baylands in the context of large amounts of tidal marsh. This is the basic vision put forth by the Bay Area Wetlands Ecosystem Goals Project.

October 10th, 2001

Board of Directors
Santa Clara Valley Water District

RE: Draft E.I.R. Lower Guadalupe River and the public hearing response 10/2/02

I would like to enter into the record the following while addressing the E.I.R. and the Public hearing held on October 2nd, 19001.

1. I support all comments made by :Mr. Bob Douglas
2. " " " " " " Mr. Russ Robinson
3. " " " " " " Dr. Robert Gross

21-1

4. I support Alternative 4 page, 2-23. This alternative is necessary not only for the Community of Alviso, Reach G, which has flooded from rivers many time but necessary for the balance of the reaches discussed in this E.I.R.

21-2

5. The Alternatives 2 and 3 page, S-10, S-12 are temporary interim solutions to flooding. Santa Clara County population is growing not shrinking. See proposed Census.
   See flood control project completed to the bay on the Coyote River which has by example protected the community of Alviso and surrounding environment where people have not had to endure flooding to their businesses and property.

21-3

Very truly,
Yolanda B. Gross

Yolanda B. Gross
Former Alviso Master Plan Task Force
Former Alviso Master Plan Marina Task Force
1200 Hope Street P.O. Box 55, Alviso, CA 95002-0055
Tel/fax 408.263.4170

Letter 22

266-0271
FAX (408) 268-7687

October 11, 2001

Terry Neudorf, Environmental Planner
Watershed Management Unit,
Santa Clara Valley Water District
5750 Almaden Expressway, San Jose, CA 95118-3686

Dear Terry Neudorf,

In the Draft Environmental Impact Report of the Lower Guadalupe River Planning Study there are a number of concerns that I still have in this very complex last of a series of flood control projects on the Guadalupe River.

22-1 On page S-2, I find the statement that the "Guadalupe River begins at the confluence of Alamitos Creek and Guadalupe Creek" does not accurately represent the real watershed parameters of the Guadalupe. Rather, Figure S-1 illustrates the full watershed and its tributaries which should be addressed in the text of this EIR and which is not. In this aspect I find the EIR is deficient.

22-2 The physical features of the upper watershed should include the topography, height, soil conditions and vegetation, habitats and wildlife of Mount Umunhum and the Sierra Azul. These are the unique features of the dynamics of this watershed which must be studied if there is to be any real understanding of the river and its potential for beneficial uses as well as for flood waters. It was my understanding that this was the whole point of watershed evaluation?

22-3 The deficiency of this delineation of the watershed may be the cause of a second area of disagreement with this document, in the scope of alternatives. In the Engineer's Report, Chapter 4, p.4-21, Upstream Floodwater Storage Alternative, there is no mention of off-stream storage, and yet that is supposed to be a top WMI priority. New instream dams and raised old instream dams are the only options presented here. This is a deficiency. ..There are a half dozen alternatives that I would submit here, and I thought there was going to be a technical workshop to review such suggestions, as the Board directed at the public hearing. In this matter I request a continuance until such a workshop can take place and I would like then to submit at least three of the top contenders, as alternatives.

22-4 In the Public Hearing there was a discrepancy in the presentation by the consultants and in the engineer's report figures in the design discharge cfs. In Table 5 page 13 of Appendix B it is said to be 20,000 cfs downstream of Tasman Road and yet in the public hearing 17,000 cfs was said to be the flood flow for the project design. This makes a big difference in a number of areas, in the loss of wetlands for one, and in the continuity of the trail system under the bridges as well as the continuity of a wildlife corridor. Please clarify this for the record. How does this affect the Appendix F engineer's drawings on sheets 34,35,36,37 and 38? Are these profiles for 17,000 cfs or 20,000 cfs.?

22-5 Though the US Army Corps of Engineers did the studies in 1970's for design flows that was before the major water imports from the San Luis Reservoir and the South Bay Aqueduct that basicly doubled the water in the Valley. As this extra water is percolated into the streams and the aquifers it does make a major difference in the water table. The saturation level of the water table in turn affects the absorption potential of the watershed, the streams and the floodplain. Has this new data been incorporated into the COE model? I believe it has not been, but should.

22-6 The historic breakaway points on the Guadalupe, like at the airport and Lick Mill, are no longer available to relieve peak events and this too needs evaluation.

There are then three areas that need to be more fully addressed in this EIR. First is the high country of the Sierra Azul and Mount *Umunhum where* Pacific storm events could be retained longer for beneficial downstream uses and to lessen related flood damage. I have written on this in the past. 22-7

Secondly, these waters should be gradually dispersed to the high percolation areas in the unconfined mid-west valley zone. Please refer to the Page and Wire (1969) Areas Favorable for Groundwater Recharge, Santa Clara County map. (I will forward copy but the District should have on hand as by their hydrologist). This would optimize the mandate for beneficial instream use for water supply as well as for the region's fisheries. (The Basin Plan and Measure B.) 22-8

Third area for review would be downstream of El Camino Real, in the confined zone, where all efforts should be made to slow urban, impervious surface runoff to the mainstem Guadalupe River until the storm surge flows have passed through downtown. The City of San Jose should be part of this element and ideally provide sufficient offstream storage of a temporary nature to offset the 3000 cfs. volume of stormwaters that they estimate will need to be pumped into Guadalupe during storm events. An extensive sunken garden in the airport approach land, recessed roads running parallel to the river, underground garages for extreme events, and even the use of highway #87 again, are all possible candidates. 22-9

The design of tributary outfalls to the mainstem Guadalupe River should be of a chevron design if one is to take advantage of old world European expertise. This is in imitation of natural stream tributary conditions and allows convergence of flood flows rather than pitting highenergy water pressure against its self, at right angles. The entire downtown storm drainage system might be part of this review, especially all areas of pumping into the river, as at airport. 22-10

The reason why I propose all the above measures is that I think the flood project as proposed for the Lower Guadalupe River is fraught with almost insurmountable problems, and you need to implement all the above alternatives to buffer the area from cumulative conditions and events. The outfall to South San Francisco Bay in El Nino conditions of lowered barometric pressure, peak tides and driving wave action is going to get less feasible with levee and floodplain build-up in Alviso. Sediment loads are going to fill in the dredged channel as fast as it is cleared each year, and probably up to Trimble or Montague as the tides extend upstream. 22-11

The original Guadalupe River meander was probably a better watercourse for these conditions. Again, may I suggest that some engineers look to Europe and review how Holland controls its interface with the lowlands and the North Sea. A lock, or canal might give more assurance as an overflow channel for storm flow events.

The flooding and pumping of the Cargill ponds has more serious environmental implications than is set forth in this document. The pumps, even with screens, are highly lethal to fish and any other pond aquatic organisms that come into range. It would seem preferable to design a flood basin, like Palo Alto's, or a series of flood basins with flap gates for some control of bay tidal action, that would create a bay marsh habitat that is in some equilibrium with the surrounding bay. 22-12

Then, in regards the industrial development between #101 and #237, and the Coyote and Guadalupe Rivers, there should be some storm drains that exit to the Bay, rather than to the Guadalupe River. If Agnews had a storm water outfall to San Francisco Bay over a century ago, as they realized that a full-flowing storm event in the Guadalupe River would accept no more, then modern industry should be able to come up with equivalent engineering to solve their high water events. 22-13

Eighteen pumping stations along the Guadalupe River need an EIR of their own. Is this pumping of groundwater of high quality as at the airport? Is it punping by CalTrans that introduces water of higher temperature to the natural stream? Is it pumping of artesian action in cellars or garages? Is there data available? 22-14

In regards Disabilities Regulations, p. 1-13, it would be important to note the present or former California State lands that front on the Guadalupe River levee that mandate, continuing public access and might accomodate one or two slots for parking and enabling a wheelchair to use the recreational trail along the levee. The mitigation site just north of #237 and the Lick Mill Agnews site do qualify. 22-15

P. 2-7 Offstream Storage Basin Alternative I disagree with and find is deficient. 22-16

Table 3-1, p. 3A-3, of the Monthly Average Precipitation for the Guadalupe River Basin and Table 3-3, p. 3A-6, Monthly Distribution of Mean Daily Flows are not really applicable here for reference as they include the IBM pumping years, and it does not reflect the base data that was used by the COE for the original 1970s hydrology study. Table 3-3 is particularly meaningless. Why not use good data? 22-17

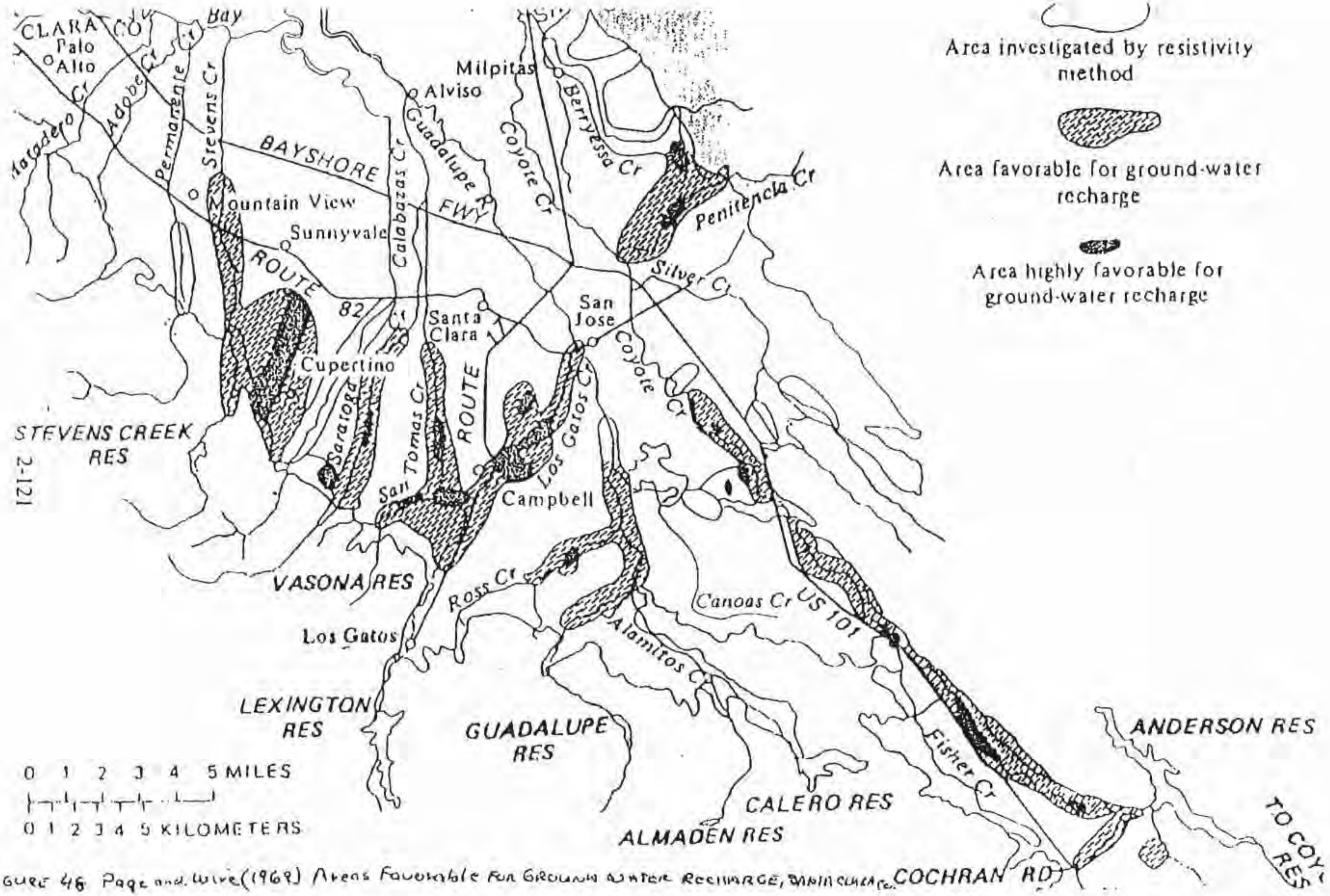
P3G-5, River Morphology, does not accurately portray the beneficial conditions
that exist in the project area for steelhead and salmon.The reach in particular
between Montague and Trimble Road has been a prime holding area for incoming
salmon, with extensive inchannel growth. The maintenance sediment removal permit
was being exercised this month in this spot which seems highly detrimental to
the fall run of salmon. The attraction flows at the airport initiate this early 22-18
upstream migration. In 1986 it was noted that there were some 260 salmon redds
in the downtown Guadalupe River just above the airport bridge which constitutes
a significant run. What is the salmon count in the river for the last ten years?
The EIR should have extensive details on the present health of this resource!
This is a serious deficiency. There is no mention of the western pond turtles
in Reach A opposite the airport. Will they continue to have enough habitat in
which to survive, and procreate, such as sandy banks and refugia? A deficiency too? 22-19

The assessment of wetlands loss in this project should be by linear feet, not
by acres, when complying with the mandate of in place and in kind mitigation
replacement for wetlands loss. Riverine wetlands have the highest possible value 22-20
for wildlife habitat and this needs to be duplicated in kind, if not in place.
In this aspect the EIR is also deficient. (P. 3E-23, 4.65 acres of riparian and
48.98 acres of wetland vegetation loss mitigation needs to be specified here.)**
As the time needed to focus on all the data in these graphs has been snafued by
the flu I would ask for a possible belated PS in this regard, but on first take
it does not seem to be truly representative of the conditions. There does not
appear to be any assessment of Los Gatos Creek temperatures which are shaded
and preferable to the mainstem Guadalupe above the confluence. "Temperatures
are lower downstream of the Guadalupe River-Los Gatos Creek confluence and rarely 22-21
exceed the lethal threshold." So says the text on 3G-8 & 9, yet the Figure 3-22
chart shows the confluence lethal for chinook salmon prespawning, at 75%. This
makes no sense, and is an obvious serious deficiency. Please give me extension,
as I will have to dredge up years of records to explain why this is so skewed!

The impacts to the species in the baylands and the Cargill ponds I will leave up to the experts from the U.S. Fish & Wildlife service. The pond levels and the interrelationship of species is best reviewed by Doctor Shellhammer, if pos. Do think that the idea of mowing the invasive cord grass is not viable. It now appears that the entire marsh area is sufficiently degraded that it needs a restoration plan, as devised by the US Fish & Wildlife Service perhaps, which this flood control project could incorporate, like the Santa Clara County Alviso Marina Park. The imperviousness of the present marsh is a distinct flood hazard. 22-22

Recreation, Public Access, and Visual Resources, p. 3I-1, needs to reference that the Santa Clara County Trails and Pathways Plan was accepted by City of San Jose and SCVWD since 1978 and it included the Guadalupe River trail from downtown. The last time I walked Reach B the eastern levee was highly used by joggers, and adopted by Hewlett-Packard, I believe. This recreation element and the wildlife corridor must be continuous. 22-23

Libby Lucas, 174 Yerba Santa Ave.Los Altos
CA 94022



GURE 46 Page and. Wire (1969) Areas Favorable For Ground Water Recharge, Santa Clara Co.

Letter 23

October 21, 2001

David Chesterman
Guadalupe Watershed Manager
Santa Clara Valley Water District
5750 Almaden Expressway, San Jose, CA

Dear Dave Chesterman,

Subject: Lower Guadalupe River Flood Protection Project
Baylands Hydraulics Workshop

Thank you very much for including me in the October 19 workshop in Alviso.
It was an eye opener to go out on the Cargill levee to the Guadalupe River
interface with the Bay, especially at low tide. Also the graphs of design 23-1
flood flows in the technical review for #237 were impressive.

It is understandable that Cargill has reservations about being the planned
overflow basin for peak flood flows; an act of nature 150-year-event would
be something else. I have always been in favor of acquisition of the lower
third, southerly portion of pond A-8, where the original Guadalupe River
meandered out to Guadalupe Slough. See enclosed USGS map. If this general
area of the Alviso salt ponds were bordered by setback levees, and the meander
restored, with floodplain, it could maybe be designed for wetlands mitigation,
flood basin, and be protected by a flap gate from highwater intrusion from the
slough (Guadalupe) as well as a weir to control flows from the Guadalupe River.

The outboard levee would be designed to best accomodate the snowy plover. As 23-2
the inboard levee is highly impacted from adjacent development it would be
retained but perhaps buffered. A habitat conservation plan could be implemented
to reduce predation and assure snowy plover reproduction viability here. A
workshop suggestion to realign the western Guadalupe River channel levee into
pond A-8 would threaten critical Forster's Tern colonies.

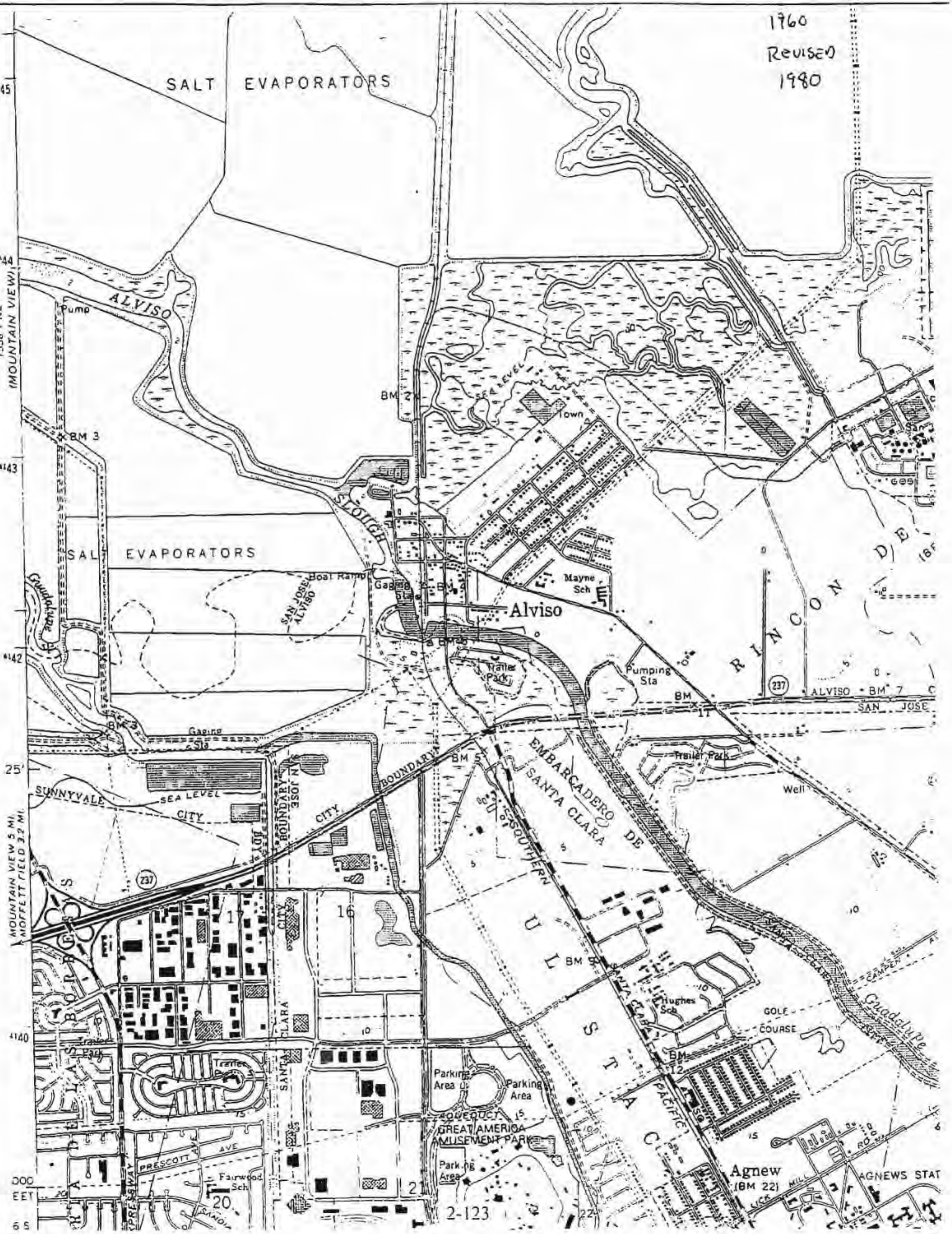
The argument against sending peak Guadalupe River flows to Guadalupe Slough,
by the consultants, as all the present capacity is needed for stormwater peak
runoff from San Tomas and Calabazas Creeks, I'm hoping is not entirely true.
Since the acquisition of pond A-4 by the District for mitigation for stream
maintenance wetlands losses is right there on the western levee of Guadalupe 23-3
Slough, could it double in design as a flood basin for these two creeks? At
least some consideration could be given to this in the alternatives analysis.
There is also the extensive buffer of the Sunnyvale Baylands Park uplands area.

The conditions of over-development in and around the Guadalupe River, Gold
Street and #237 triangle are almost insurmountable from the standpoint of flood
control. Since the wetlands that were in existance at the time of this USGS map
have mostly been filled, as permitted by the San Francisco US Army COE and other
regulatory agencies and inspite of countless anguished letters from citizens,
there appears no chance of retaining sufficient flood plain toinduce scouring 23-4
of the Guadalupe River channel through Alviso by natural hydraulics. If the one
remaining loop north of #237, on the eastern bank, were extended in a floodplain
to First Street and to the west to include the Gold Street wetlands, could any
viable floodplain flushing action be achieved to clear sediment daily from the
river out to the Bay? Bob MacArthur's analysis of high water at #237 is critical.

The build-up of this area since the 1995 flood and the introduction of the 18
pump stations really call for extreme measures and expenditures by someone. I 23-5
can see why the San Francisco COE don't care to come to meetings anymore.
Thank you again for including me in this process.

Libby Lucas

Libby Lucas
174 Yerba Santa
Los Altos, CA 9402



1960
Revised
1980

Letter 24

James T. Harper

1393 Garthwick Drive
Los Altos, CA 94024
650 968-6434
tharper@ix.netcom.com

October 8, 2001

Mr. Dennis Cheong, Project Manager
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Re: Lower Guadalupe River Flood Protection Project

Dear Mr. Cheong,

I did appear on behalf of Realtec Properties at your public hearing in Alviso on October 2, 2001.

Following is the statement and question request that I submitted at the public hearing:

> Statement
> An increase in levee height and floodwalls will create increased local flooding and, without concurrent local drainage improvements, an economic hardship on adjacent property owners. 24-1
>
> Question
> What co-ordination will be made with the City of San Jose to ensure that local drainage improvements are provided concurrent with the Lower Guadalupe River Project to avoid additional flooding of adjacent properties due to increased levee heights and floodwalls? 24-2

Your response will be appreciated.

Very truly yours,

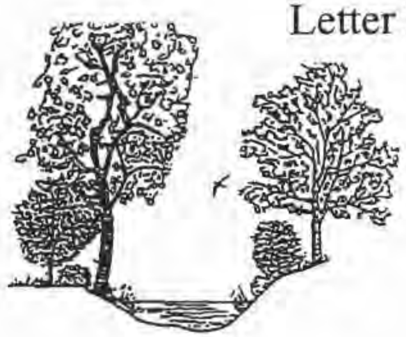
Jim Harper

James T. Harper

cc Realtec, w/encl

Letter 25

SANTA CLARA COUNTY
STREAMS FOR TOMORROW
Post Office Box 1409
San Martin, California 95046



October 5, 2001

Mr. Terry Neudorf
Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Mr. Neudorf:

Comments on the Draft Environmental Impact Report for the Lower Guadalupe River Flood Control Project

We have the following comments on the Draft Environmental Impact Report (DEIR) for the Lower Guadalupe River Flood Control Project (LGRP) for your consideration.

1. The Construction-Area Fish Management Program (page 2-31) includes the environmental commitment that "Sufficient flow will be maintained through culverts, pumps, or siphons to allow consistent streamflow in the downstream segments and provide unimpeded passage of juvenile salmon during construction." This requirement also should explicitly apply to juvenile steelhead, which is an intent of the basic Program. 25-1

2. In reference to the environmental commitment quoted in comment number 1 above, streamflow bypass facilities employing gravity flow, such as culverts and siphons, can provide unimpeded downstream juvenile salmonid passage; however, diversion facilities employing standard water pumps do not provide the intended "unimpeded passage" of juvenile salmonids (smolt). The statement should be modified to exclude the use of pumps during the period of juvenile salmonid downstream migration. 25-2

3. The Construction-Area Fish Management Program (page 2-31 through 32) includes the environmental commitment to operate a fish trap during the month of June if construction activities may impede downstream-migrating juvenile salmonids. Trapping and relocating activities can be harmful to salmonids by causing stress and an increased potential for direct and indirect mortality. This is of major concern considering the suboptimal to unacceptable warm water conditions in the lower Guadalupe River for smolt during the month of June.

Such trapping operations should be avoided wherever possible, particularly when the target fish are sensitive, coldwater species and they are already subject to the stress of capture in ongoing smolt trapping operations. Outmigrating smolt should not be subject to multiple trapping and handling events in the warm water temperatures of June. The proposed June trapping operation would be deleterious to smolt salmon and steelhead survival. 25-3

If the proposed stream-monitoring criteria identifies the presence of outmigrating salmon and/or steelhead during June, instream construction should be delayed until July 1. Instream construction should not be initiated in the month of June unless the proposed stream-monitoring criteria documents the absence of smolt.

Since there appears to be only two locations where instream work may occur and thus potentially impede outmigration of smolt (the vortex weir construction near the I-880 bridge and the replacement of the eastbound Highway 237 bridge), it seems reasonable that the District could completely **avoid** impacting June salmonid outmigration by limiting instream construction activities to the period of July 1 through October 15, and to that portion of June when stream-monitoring criteria document the absence of smolts. Since the District has an obligation to avoid impacts wherever feasible before identifying impact mitigation measures, we recommend that the District delete the June fish trapping commitment and, as a substitute, adopt the impact avoidance measure of limiting instream construction to the period of July 1 through October 15 and that portion of June when stream-monitoring criteria document the absence of outmigrating juvenile salmon and steelhead. This appears feasible and reasonable in the context of the limited amount of instream work associated with the LGRP. 25-3 cont'd.

4. The Construction-Area Fish Management Program (page 2-31 through 32) and the Construction Periods Limits (page 2-32 through 33) depend upon the results of "ongoing trapping of downstream-migrating fish" in the stream-monitoring criteria and process for determining the presence or absence of outmigrating juvenile steelhead and salmon during May and June, where the findings of this process trigger implementation of various impact avoidance actions. No alternative criteria are presented for May and June in the event "ongoing" smolt trapping is not in operation. The Final EIR must identify the alternative criteria or approaches that will be employed to trigger the various smolt impact avoidance measures in the event the referenced ongoing fish trapping is not operating. 25-4

5. Considering the limited amount of actual instream construction work included in the LGRP, the District should consider simplifying the Project's steelhead and salmon smolt protection and impact avoidance environmental commitments by adopting the Stream Maintenance Program's anadromous salmonid migration and spawning impact avoidance BMP measure, which restricts instream work to the period of June 15 to October 15. This would be a major simplification of the LGRP environmental commitments relative to smolt protection during the months of May and June and would provide effective impact avoidance. It would require scheduling the vortex weir and SR 237 bridge construction activities during the work window of June 15 to October 15. 25-5

6. The Construction-Area Fish Management Program (page 2-32) recognizes the potential need to provide upstream passage for fall-run Chinook salmon through or around instream construction sites from September 1 to the end of the construction season. Impeding salmon upstream migration passage would be a significant adverse environmental effect, considering the special status of the species. 25-6

The subject Program states: "The need to provide passage will be based on the occurrence of more than 25 adult chinook salmon, flow conditions, and cooperative assessment of passage needs by the District, NMFS, and DFG. Occurrence of adult chinook salmon will be based on trapping at an appropriate downstream location, or other method developed cooperatively by the District, NMFS, and DFG." (page 2-32) No explanation nor justification is provided as to why 25 salmon must be counted or captured at some unidentified downstream site before upstream passage through or around the construction area(s) is provided. Delaying salmon migration by impeding them or trapping and holding them in marginal September - October lower Guadalupe River habitat conditions may adversely affect the health of individual fish and the viability of any subsequent spawn from them. Impeding migration may stimulate spawning in marginal, undesirable habitats and locations. Trapping and holding adult salmon or impeding their upstream movement may, in itself, cause injury and/or death to these fish. Artificial impediments to Chinook salmon spawning migrations must be avoided.

The action determination parameter of "flow conditions" is undefined. If streamflow conditions are sufficient to allow adult salmon to reach cofferdams at the downstream end of construction sites, such as the vortex weir construction site in Reach A, then unimpeded passage through or around the construction areas must be provided. 25-6 cont'd.

The reference to "other method developed cooperatively by the District, NMFS, and DFG" is insufficient to determine the feasibility, effectiveness, and appropriateness of the proposed action. Developing and implementing an "other method" may constitute deferring the formulation of an essential mitigation measure to some future date, an action which is unlawful pursuant to the California Environmental Quality Act. (CEQA).

The Program goal of providing upstream passage for Chinook salmon is an essential project mitigation requirement. Unfortunately, this proposed environmental commitment as presented fails to provide sufficient information for decisionmakers and the public to make a determination as to whether the potential adverse impacts associated with impeding salmon migration will be mitigated to a less-than-significant level. The measure as presented is inadequate and incomplete. The Final EIR must address this deficiency by presenting a specific, feasible, and effective commitment to providing unimpeded Chinook salmon passage.

7. The Final EIR should include a commitment that vortex weir construction in Reach A will meet National Marine Fisheries Service criteria for anadromous salmonid passage. 25-7

8. We seek confirmation in the response to comments that the only LGRP activities in the low-flow channel will be (1) construction of the vortex weirs near the I-880 bridge in Reach A, and (2) construction of a new SR 237 eastbound bridge. 25-8

9. Mitigation Measure F-1 (page 3G-17) provides passive fish-passage connections between the excavated sediment removal sites and the low-flow channel. What assurances can be provided in the Final EIR that (1) the connections will remain functional over time, and (2) drainage through these connections during receding flows following storm events will not cause accelerated erosion of the connections and downstream sedimentation in the low-flow channel? 25-9 25-10

We recommend against certification of the subject draft EIR until the comments, concerns and recommendations presented in this letter have been fully addressed in a revised EIR. Please send us a copy of your response to comments/Final EIR document, the draft "Findings of Fact" prepared pursuant to the California Environmental Quality Act, and timely notice of public meetings or hearings regarding the LGRP and the EIR.

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report. If you have questions about our comments and recommendations, please contact me at the letterhead address or telephone number (408) 683-4330 (voice and fax).

Sincerely,

Keith R. Anderson

Keith R. Anderson
Environmental Advocate

cc: Mr. Patrick Rutten
National Marine Fisheries Service
Santa Rosa Office

CITIZENS COMMITTEE TO COMPLETE THE REFUGE

453 Tennessee Lane, Palo Alto CA 94306 Tel 650 493-5540 Fax 650 494-7640 e-mail: marsh@refuge.org

ENDORSERS

Acterra
Baylands Conservation Committee
California Hawking Club, Inc.
California Waterfowl Association
California Wildlife Federation
Committee for Green Foothills
ommunities for a Better Environment
Defenders of Wildlife
East Bay Green Alliance
Federation of Fly Fishers
Friends of Charleston Slough
Friends of Redwood City
Golden Gate Audubon Society
Green Belt Alliance
League of Women Voters of the Eden Area
League of Women Voters of the Fremont Area
League of Women Voters of Palo Alto
League of Women Voters of South San Mateo County
Mission Creek Conservancy
Loma Prieta Chapter, Sierra Club
Madrone Audubon Society
Marin Audubon Society
Mission Creek Conservancy
Mono Lake Committee
Mount Diablo Audubon Society
Napa-Solano Audubon Society
Native Plant Society, Santa Clara Valley Chapter
Ohlone Audubon Society
Planning and Conservation League
San Francisco Chapter, Sierra Club
Santa Clara Valley Audubon Society
Save San Francisco Bay Association
Sequoia Audubon Society
Sportsmen for Equal Access
Tri-City Ecology Center
Trout Unlimited
United Anglers of California
Urban Creeks Council

AFFILIATES

itizens for Alameda's Last Marshlands
Citizens for Open Space in Alvarado
Friends of Foster City
Save our South Bay Wetlands
Save Wetlands in Mayhews
Whistling Winds/Pintail Duck Clubs

October 11, 2001

Terry Neudorf
Environmental Planner
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686
FAX 408-266-0271

Re: DEIR Lower Guadalupe River Flood Protection Project

Dear Mr. Neudorf,

Thank you for allowing us to comment on the Lower Guadalupe River Flood Protection Project. Our members worked with Congressman Don Edwards in 1972 to bring about the legislation that established the National Wildlife Refuge on San Francisco Bay. We lobbied at that time for the placing of the Education Center in Alviso because of the people there and because of our deep interest in the wildlife and other natural resources of the area being discussed in this document.

Because of the large amount of material submitted, we are able to comment in a general way on just a few issues. Nevertheless, we have many concerns regarding the plans put forth.

A weir is planned on Alviso Slough that will direct overflow waters into Ponds A5, A7 and A8. Since these ponds are still in Cargill's ownership, what contracts have been made between the District and the owner that provides for the addition of flood waters to the ponds? Have the "permanent flood easements" mentioned been acquired? How will such management plans influence future restoration to, for instance, tidal marsh, or to snowy plover habitat in various areas? 26-1

The DEIR states that increased flooding will occur in Ponds A 13, A15, and A17. These ponds are owned by the Refuge; have the Service wildlife biologists studied the impacts on species that currently use them? Have agreements been reached for their use as flood control areas? 26-2

The listing of the species, many of them of special status, that occupy the various ponds is useful, but serves to increase our anxiety over changes in use when flood waters are added. The New Chicago acreage, for example, has always required special supervision to prevent loss of salt marsh harvest mice during heavy rainfalls. Pumping, as is promised in the DEIR for the future, may be adequate, but would require intense observation. We have had considerable experience observing how a flood control basin in another area has functioned over a period of years, and we have learned 26-3 that there are many opportunities for failure to protect even endangered species. The close supervision required to monitor water levels and institute pumping is sometimes lacking–especially in times of widespread emergencies! 26-3

There is always the possibility when levees are raised that there will be impacts to wetlands and wildlife from the expansion of the footprint and because work is sometimes done carelessly with impacts to fringe marshes.

We would appreciate added information regarding the assessment in the DEIR of changes in water depths in New Chicago Marsh and the many ponds. How will the predicted new depth limitations impact the current wildlife populations? 26-4

In fact, for this project, we cannot agree with the often repeated phrases, "no mitigation needed" and "impact is considered less than significant". It appears that hundreds of acres that are ponds and seasonal wetlands will essentially be turned into flood basins. 26-5

Please advise us on any further action taken on this project.

Thank you for allowing us to comment.

Yours sincerely,

Florence M LaRiviere

Florence M. LaRiviere
Chairwoman

cc: Don Edwards San Francisco Bay National Wildlife Refuge
California Department of Fish and Game

Letter 27

WESTERN WATERS CANOE CLUB

AFFILIATE MEMBER - AMERICAN CANOE ASSOCIATION - EST. 1880

Oct. 12, 2001

Mr. Terry Neudorf
Watershed Management Unit
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Subject: Comments - Draft Environmental Impact Report, Lower Guadalupe River Flood Control Project, Dated August 2001.

Reference: Information presented at the Public Hearing on the Lower Guadalupe River Flood Control Project in Alviso on October 2, 2001.

Dear Terry:

Our club has reviewed the subject Report and would like to offer the following comments:

We certainly agree that there is a high risk of flooding in the project area. However, we believe that the proposed project will only reduce the chance of minor flooding in the area but will actually increase the chance of major and/or catastrophic flooding. At the same time it will reduce water quality and wipe out essential habitat for wild and aquatic life, including a number of special status species, greatly increase continued maintenance costs and degrade all designated beneficial uses. It will not satisfy CEQA requirements or regulatory agency goals! 27-1 We have offered suggestions on ways to reduce the chances of both nuisance and catastrophic flooding and greatly reduce maintenance costs and impacts as requested at the project Planning meeting held in the spring of 2000. We have also completed a project questionnaire sent around about the same time frame requesting project comments and suggestions, apparently to no avail. (Ref. Appendix D) We find the subject EIR to be full of inconsistencies and inaccurate and/or conflicting statements. It does not adequately cover many of the aspects of the proposed project so it is impossible to know what is really being planned or to gain any insight at to what will really be done. We feel the document it is totally inadequate to fulfill the requirements of CEQA. We also believe that due to the proposed project's severe environmental impacts that an EIS is required and we will request that one be generated. 27-2

The simple fact is, sections of San Jose, Santa Clara and Alviso are adjacent to the Guadalupe River and are in the river's flood plain as the maps provided clearly show.

Rivers are nature's machines and they will always attempt to adjust themselves following the basic laws of physics. They will always attempt to do natures work with the minimum expenditure of energy and in the most efficient manner possible and will always seek stability and access to their flood plains. The Guadalupe River is no exception, it has overtopped its banks in the past and will continue to attempt to do so in the future. This is not a recent revelation, it is a well known and has been well documented for well over 200 years. Back in the late 1700's the budding Santa Clara Mission and Pueblo of San Jose, were both flooded numerous times and were actually moved several times during the first few years of their existence to avoid the problem. Over the years the river has continued to flood during heavy storm periods, as all rivers will, despite all efforts to contain it. This natural river process will most assuredly continue. The root cause of our current flooding problems is the arrogant and foolish belief by a dwindling number of people that nature and rivers can be controlled. They not only intentionally build in harms way but then seek protection for their folly, at the burden of the environment and the rest of the community smart enough not to encroach on the river or occupy its flood plains.

While all development in a watershed will have some degree of negative impact on storm water run off and will increase the likelihood of damaging flooding, efforts must be undertaken to minimize this impact. We have no objections to providing reasonable, cost effective and environmentally friendly measures to help reduce the risk of damaging floods. We most strongly object to extremely expensive and futile efforts to provide "Flood Control" at the expense of our environment and the average citizens for the benefit of those who blatantly defy nature and common sense. And, we also strongly oppose those that encourage such foolishness and/or profit from it, at the expense of others. Until man learns to control nature, we will not be able to control floods or provide sure protection from them as is so often promised. As demonstrated over and over again in California, across the US and throughout the world, traditional Flood Control measures, not only, do not provide protection against major floods, they usually make matters worse. Far more disturbing is that people are often encouraged to occupy flood prone areas by government leaders promising them protection from flooding which they can't possibly provide. Officials often resort to distorting the truth and outright lying to the public to sell their agendas and they are never made to pay the consequences for their actions. It is well past the time to start holding those responsible for this deception and fraud accountable for their actions. The tax payers need to stop throwing large sums of hard earned dollars down the drain for promises not kept and projects that don't work especially when they further destroy the little remaining quasi natural riparian and riverine environment in the Santa Clara Basin.

Flood Control efforts on the Guadalupe River have been a dismal failure to date and are a prime example of all that is wrong with the traditional concepts of "flood control/protection projects." At the October 2^nd^ meeting in Alviso Mr. R. Robinson, a long time Alviso area resident testified that prior to 1963, the time of the first lower Guadalupe River Flood Control Project, there were little if any sedimentation problems in the river. It was only after the first flood control project was completed that sediment problems started. It is interesting to note that drawings of the historic channel in the subject EIR show the lower Guadalupe to have a meandering channel. Meandering channels are most often observed in estuary areas and are the type of channels naturally constructed to carry the river's sediment load.

Approximately 15 years ago another Flood Control Project was completed on the Lower Guadalupe River from Hwy 101 to Alviso which promised protection from the 100 year or 1% flood. It failed to do so. According to available information, it was designed to carry a 100 year flow of 17,000 cfs, but widening of the channels in the area and problems upstream soon caused sediment build up which decreased channel capacity and increased flood potential. For the past 10 years there has been a number of efforts to raise the levees in the area to increase capacity and to provide the promised level of protection. So, why is yet another flood-control project needed for the same area at this time? The answer is simple, channel widening and bypass channels do not work! They increase sediment problems and the chance of catastrophic flooding. Now, not only are the same flawed concepts again being proposed, but it is being stated that the 100 year flood event will produce a flow in the lower Guadalupe River of 17,000 cfs, the same level estimated over 17 years ago. It is illogical to think that with all of the increased development, including the expansion of San Jose Airport adding acres of impervious surface and outfall pipes to the river, that flash flows will not substantially increase in the lower part of the river. It is estimated that the 100 year flow in the lower Guadalupe could easily top 25,000 cfs and this figure will continue to increase with increased development unless something is done to prevent it. There is only so much water that can be placed in a confined system before its capacity is exceeded. 27-3

Our club requested the San Jose Airport Authority to address our concerns about providing extra flash flows to the Guadalupe River at a result of their expansion project, in light of the fact that it currently did not have the capacity to handle a 25 year event downstream. The response we received, which is documented in the EIR's Response was that the river had the capacity to handle the 100 year flows. Why did officials ignore this problem? Who is lying and who will be held accountable for this deliberate deception? The subject EIR references a Peak Flow Frequency Curve for the St. John Street gage station, which shows a 100 year flow of 17,000 cfs at that location. So, it is totally illogical to think that the flow level will not increase substantially down stream with all of the recent development. Please explain how the flow levels can remain the same downstream with all of the additional runoff and drains dumping water into the river beyond this point. It is also totally naïve to think that pump stations, which pump storm water into the river during storm events will not do so as some say when the river channel nears capacity. When there comes to pump water into the river and try to stay dry of sit with the pumps off and get flooded the pumps will be turned on. 27-4

Since completion of the Lower Guadalupe River Flood Control Project in the mid 80's, there have also been a number of "emergency flood control efforts" along the very same stretch of river. These efforts mainly consisted of raising the levees in an effort to increase the river capacity to carry flood flows as it was recognized that the channel was not capable of carrying expected flows. So officials were very aware of the problems.

However, at the very same time the above emergency measures were underway to increase flood protection, large scale housing and high tech. industrial development was being permitted in the river's flood plain right next to the levees that were being raised. This is not only irresponsible, it is grossly negligent. It should be pointed out that the housing developments downstream of Tasman Ave. are well below the tops of the levees and dangerously close to them. Not only is most of the development in this area in the Guadalupe River flood plain, it also falls in Coyote Creek's flood plain and is in a tidal zone as well so it is in triple jeopardy. 27-5

At the project planning meeting held at the Silicon Valley Conference Center on May 3rd, 2000 one of the first pictures one encountered on entering the room was a 1983 picture of flooding in Alviso. The problem is the flooding depicted was **NOT** the result of flooding from the Guadalupe River. Was this a deliberate attempt to mislead and scare the public into supporting the project? This picture clearly showed a fairly high tide and **ALL** of the water inundating the southeast area of the community coming from Coyote Creek. The picture clearly shows the Guadalupe River to be well within its levees, even in the tidal area but it was used to depict Guadalupe River flooding and the need for the proposed project. Why? 27-6

The EIR is inconsistent when addressing the amount of vegetation, which will be removed during construction and by post construction maintenance. In some places it states little vegetation will be removed and in other areas it states "that moderate to aggressive vegetation will be required in all reaches over the life of the project. Which is true? At the Public Hearing on the Project in Alviso on Oct. 2nd Mr. Robert Santos, SCVWD Board Member, District 2, stated "all vegetation should be removed from the channels." He further stated that he was tired of the regulatory constraints being imposed on the District, which prevented the District from removing vegetation and was tired of dealing with the environmental and regulatory agencies. Mr. Tony Estremera, At Large Director and current Chairman, stated that it was unfortunate that the District could not perform the maintenance it wanted to do, when it wanted to do it but they are being constrained by the regulatory agencies. Dr. Bob Gross, a past SCVWD Director and Chairman, correctly stated the proposed project would not work and that flood flows would be much higher than predicted. However, he advocated concreting the entire channel, all the way to the bay, as soon as possible. These views, as well as the recently proposed projects on the Upper and Lower Guadalupe River, are clear evidence that all of the propaganda the SCVWD has recently published about having "new environmentally friendly policies and programs " is totally bogus and without foundation. It reveals the real desires and goals of the District are to continue with their tradition of constructing expensive monster projects requiring extensive maintenance, which will have to be redone time and time again as they continue to fail. It is also very clear that the SCVWD intends to keep fighting to obtain relief from regulatory requirements that are preventing them from totally destroying the few quasi natural water corridors that remain in our valley. 27-7

There are also vastly different stories being told about various projects in the reach of river between Highway 101 and I-880. The subject EIR identifies this area as 27-8

Reach A of the project. It further states that "the portion of Reach A located upstream of Airport Parkway is coincident with the downstream reach of the Downtown Guadalupe River project." In reality, this area is a mitigation site for the Downtown Guadalupe Flood Control Project. The reach from Highway 101 to I-880 is also identified as part of the Upper Guadalupe River Flood Control Project." Why are three flood control projects working on the same reach of river, all doing different and sometimes conflicting things? The Upper Guadalupe River Flood Control project states that the east side of the riverbank from Airport Parkway to I-880 will be excavated, and step gabions will be installed in some areas. The Downtown Guadalupe Flood Control project states the site upstream of the Airport Parkway will be used for mitigation plantings. Extensive mitigation plantings actually took place on the western side of the river in this area several years ago. The subject EIR shows the exact opposite. It shows the eastside of the bank will be used for mitigation and the western side of the bank is designated for aggressive maintenance. The Highway 85 (Guadalupe Parkway) project has also recently removed a lot of riparian vegetation on the eastern side of the river between Airport Parkway and I-880. What will really be done in this area? 27-8 cont'd

The text of the subject document also states that there will be mitigation plantings in Reach A downstream of Airport Parkway, yet the vegetation drawings provided show that most all of the area along this section of the river will be subjected to aggressive maintenance or construction. The drawings show only a very narrow band, about 10 to 15 feet wide on each side of the channel in the wetted zone devoted to mitigation, preservation or buffer areas. How can any riparian vegetation be planted in this area? 27-9
The EIR states that "vegetation management impacts in reaches A-G would result from cutting and hand removal, herbicide application, or excavation of sediment in the channel. It also states "Riparian and wetland habitat would be lost in reaches B-E during sediment excavation activities. In addition, it states all impacts would occur outside the established buffer zones. In the Summary of Impacts Table it states that "sediment removal would have no long term effect because it would not be excavated from the low-flow channel." These statements seem conflicting. Will sediment be removed from the active channel or not? From the drawings, it appears that in the lower part of Reach A and over the entire length of Reaches B, D, E, F & G there will be a narrow ribbon of wetland vegetation, most likely reeds, approximately 12 feet wide on each side of the channel. This token vegetation will not provide the needed shade cover for the river and will be wiped out at the first moderate flow. When this happens, the river's width/depth ratio will greatly increase and any suitable fish habit will be destroyed. This will not only be devastating to salmonids, it will increase erosion and sediment deposition as the river tries to rebuild a stable channel and this is the exact opposite of the proposed project's goals and the desired condition. 27-10

The subject EIR also states up to 4 "vortex rock weirs will be installed downstream of the I-880 bridge. Why? Vortex rock weirs, of the type depicted in the EIR, are proven to cause bank erosion. Four concrete notched weirs were constructed under the I-880 Bridge by the Downtown Guadalupe River FCP and at least several are in the process of failing. They are also causing the river to downcut downstream. Why 27-11 exacerbate this problem? What is really going to happen in these reaches and who is coordinating all of the efforts? 27-11

Another area of concern is Reach C, between Trimble Ave. and Montegue Expressway. There was a major mitigation site planted in the upper half of this reach to compensate for prior project habitat destruction. However, this mitigation has not been successful and has never functioned as promised. When will this mitigation site be replanted? How will its success be assured? Plans for the subject project call for continued sediment removal in or directly adjacent to much of this mitigation area so how will it be protected? Please provide a plan and schedule showing when and how this will happen. In addition, the drawings of this reach, included in the EIR, clearly and correctly show the river breaking out of its natural channel and attempting to construct a new meandering channel at a number of locations down the bypass area. This shows the river's natural attempt to recreate its meander pattern and regain its stability and natural function. This natural process is primarily the reason that the mitigation site failed. Sedimentation from upstream problems and high flows either buried or washed away the mitigation plantings as the river attempts to adjust itself to changing conditions. It is also a clear indicator that proposed flood control concept, which is similar to the currently failing concepts, both in this location as well as up and downstream, will not work. What does it take for the SCVWD to learn from its past mistakes? What does it take to keep them from repeating past mistakes over and over again at great cost to the taxpayer? 27-12

The Downtown Guadalupe River Flood Control Project continues to have problems and is not working according to plans. Concrete mats and log crib walls recently installed in an effort to stabilize failing areas are being undermined and will fail in the not to distant future. The bypass channels of Contracts 1 & 2 continue to have erosion and sediment problems and the main channel is now downcutting. It is predicted that the main channel will eventually migrate to the bypass channel area as it attempts to regain access to a floodplain. How will these upstream problems affect the proposed project and what will ensure that the proposed project will work properly when previous projects, using the same flawed bypass concepts, do not? 27-13

While the project proposes to provide flood protection for the 100 year or 1% event, what happens when there is a 101, 200 or 500 year event? As previously stated, if the 100 year flow at the St. John Street gage station is correct, the 100 year flow on the lower Guadalupe River could easily top 25,000 cfs. So we believe the project is totally inadequate to provide the promised protection even before it gets off the drawing boards. In addition, hundred year events have a very nasty habit of occurring far more frequently than advertised. In a natural system when a river floods, water slowly rises and spills onto the flood plain where it spreads out and deposits sediment, which beneficially rejuvenates the land. In a confined system when levees or flood walls either fail or are overtopped, a wall of flood water, debris and sediment hits the flood zones at high velocities causing enormous destruction and high potential for injury and loss of life. The EIR needs to address the amount of damage that will be caused, including the number of injuries and lives that will be lost as a result of an event that substantially exceeds the 27-14 designed flows. It must also address these same expected losses in event of the failure of the retaining structures, for each of the proposed alternatives. 27-14 cont'd

The subject EIR states that there is no historical evidence of Chinook salmon migrating and spawning in the Guadalupe River. This statement is not correct! There are historic accounts dating back to the 1700, which indicate salmon where in the Guadalupe River. Other accounts by historians state, the local natives lived on a diet of salmon and trout which were available almost all year around because of the timing of their runs. A number of renowned biologists from the 18 and early 19 hundreds state that Chinook salmon occupied all streams of any appreciable size from San Francisco down to the Ventura River. Long time residents and local fishermen state that they have observed and or caught Chinook salmon in the Guadalupe River from the 1920's to the 1960's and both their fathers and grandfathers caught Chinook salmon in prior years dating back into the 1800's. (Ref. Appendix A & B) 27-15

In addition, the subject EIR states the Chinook salmon found in the Guadalupe River are probably strays from Central Valley runs. It states "Genetic evidence suggests that at least some of these fish originated form hatchery stock released into Central Valley streams." This statement is blatantly false and must be corrected! Genetic testing performed on Guadalupe fish to date shows the exact opposite. It shows that a number of fish have unique genetic markers not found in any Central Valley fish, wild or hatchery born. Furthermore, genetic testing currently does not have the capability of distinguishing between wild or hatchery fish and can't identify the source of a fish, it can only tell where the fish do not come from. Dr. J. Nielsen clearly states that "Chinook from the Guadalupe River drainage that were collected by CDFG showed distinct haplotypes, not found in any Central Valley populations (wild or hatchery). These unique genotypes appear to be distributed through out the spawning run and not temporally distributed onto early or late spawning populations on the Guadalupe River. The genetic origins of these fish remain unknown, but they are **definitively not hatchery strays based on evidence available from hatchery collections analyzed."** Dr. Nielsen reported the results of her testing to the CDFG in a formal report and also reported the results in the Federal Register so it is a public record. (Ref. Appendix C) 27-16

EIR Figure 3-20 depicts when Chinook salmon can be expected to be in the river. It shows juveniles can be expected from January to May. However it fails to indicate where these young fish are expected to go after May. Juvenile Chinook out-migrate from the upper sections of the river during the stated time period. However, it is generally believed, by fish biologists, that they must remain in the brackish or estuary waters for six months or longer feeding and adapting to the salt water to prepare for their life at sea. If this is the case, either adult or juvenile fish would be expected to be in the lower project area pretty much all year long. The EIR must address how the project will protect these fish and the critical habitat and food sources they need to survive. 27-17

The subject EIR correctly states that the Guadalupe River is navigable by small watercraft at moderate flows from above Blossom Hill Road to Alviso. While there are no boat ramps on the Guadalupe River, small watercraft such as canoes and kayaks do not need launch ramps, all they need is a small narrow path to the river. Although boating opportunities on the river may be limited during the low flow season above Coleman Ave., they still exist. Our club has canoed the Downtown section of the river on numerous occasions even in July, although there are a number of obstacles that must be portaged. The weirs under I-880 do block navigation and as such are believed to be illegal. The EIR needs to address how any in-stream structures planned by the project will permit navigation by small watercraft and how the weirs under I-880 will be modified to allow navigation. The Guadalupe River is just about always navigable by canoe or kayak in the project area except at very low or negative tide, in the tidal area below Montegue Expressway. There is also boat launch ramp on Alviso Slough, which may no longer be useable for power boats, but was still useable for canoes and kayaks a year ago. This is a good launch point for small watercraft to float up the river on the incoming tide, up to Montegue Expressway, and then float back out again on the outgoing tide. 27-18

In order to meet the stated goals of the project and the requirements of CEQA only two project options seem viable. Both options would have two components and one of those components in both options is to restore the river channel to a natural meandering channel with a modified floodplain. This would satisfy all of the environmental and Clean Water Act goals. It would increase riparian and aquatic habitat and water quality, eliminate sediment problems thus perpetual maintenance and improve all beneficial uses and flood protection, as the river would function in a natural manner. The SCVWD has recently been advertising that they are now an environmentally friendly organization and that they are "working with rivers not against them." So it is time for them to walk their talk.

The second component of the project would be to increase flood protection. This could either be accomplished by set back levees or bypass culverts/pipes (storm sewers). The only way to carry more water in a confined system is to either expand the system or increase velocity. You can not substantially increase velocity in a natural system without destroying it and negatively impacting all beneficial uses while causing all sorts of related problems. 27-19

The storm sewer bypass option probably has the most promise. Storm sewer water would have to be routed to the bayland marsh areas or directly into the bay, which has the capacity of handling such flows. If large flash flows were prevented from entering the river, the river corridor would have plenty of capacity to handle non-flash flows and the river channel could be restored. If flash storm flows were prevented from entering the river, perhaps even the bypass culverts now proposed for the Downtown Guadalupe River Flood Control Project would not be needed. As an alternative, the water that enters these culverts could be routed directly to a storm sewer system and then to the bay, as the return of the water to the river from bypass culverts is going to cause all sorts of erosion and water quality problems. Routing storm water run off to storm sewers, which do not dump into the river. would also prevent local flooding which happens when the river corridor is full and the pipes, which dump into it back up.

The EIR needs to discuss the design and construction costs of each of the above alternatives as well as the annual and total expected maintenance costs of all of the alternatives over the life of the project. With either the storm sewer bypass or setback levee project the cost of restoring the river to a more natural condition could be funded by grant money available for such purposes and flood control money could be devoted solely to the storm sewer bypasses or setback levee construction.

None of the proposed options listed in the EIR, with the possible exception of the bypass culvert (Alternative 4), if modified with a component to restore the natural channel's function and eliminate the maintenance component, will satisfy the stated project goals. These goals include providing environmental protection, public access, avoiding disturbance of existing fish and wildlife habitat, and the protection of special status species. All of the other alternatives would either directly or indirectly severely impact or totally destroy the little remaining habitat left in the project area and will not satisfy CEQA requirements. 27-20 The belief that setback levees are unimplementable as they would encroach on existing facilities and parking lots is not a valid excuse for not considering this option. The river was in place long before man came to the area and the facilities and parking lots were constructed. This construction knowingly was permitted in a hazardous area, in harms way, on the river's flood plain. When facilities and homes are in immanent danger the government condemns and takes the buildings, such as in the mud slide areas near Daily City or along the pacific coast. Government normally doesn't permit the construction of buildings in danger zones, such as areas prone to mud slides, earthquake faults, glide paths for airports etc. Even when the government wants to build a highway it takes property or secures the rights of way to property to satisfy citizens needs. It should be far easier to secure easements to property next to a river as it's in a well known, clearly obvious danger zone and the protection which will be offered will mainly benefit the property owner and neighboring lands. 27-21

Please address all of out stated concerns in the Final EIR and ensure that the project selected will meet all of the project's stated goals, the SCVWD stated environmental policy, CEQA and Regulatory Agency mandates and will enhance the designated beneficial uses.

Lawrence Johmann

Lawrence M. Johmann PE, CQE, CRE

Cc: GCRCD
ACA
Steve Frie

APPENDIX A

The presence of both Chinook and coho salmon and steelhead trout in South Bay waterways is documented in a number of historic accounts by renown historians and biologists, despite many recently published statements to the contrary.

Ohlone life was busy. They lived in an area with numerous salmon streams and developed a lifestyle to adjust to the salmon seasonality. (Galvan) The early Spanish explorers & missionaries found indigenous people depended heavily on the seasonal rush of fish. "The Ohlone held confidence in catching and preserving enough to last to the next spawning. The favorites and most numerous were the **King Salmon**, the **Silver Salmon** and the Steelhead/Rainbow Trout," (Heizer & Elsasser). "The Ohlone found joy and satisfaction with the profusion of salmon in the area. Every tribe north of Monterey used its stream to its advantage during the seasonal salmon runs," (Heizer and Elsasser). The Ohlone trapped trout and salmon in the creeks and ponds of the hills at the end of the season. In some cases the Ohlone would dam the creeks, toss soaproot and mashed buckeye in to stun the fish. the fish would rise to the surface and the Natives could catch & eat them (Margolin). More often, the principal method of catching fish was with nets, the effectiveness of this method is reported in personal journals of visitors (Heizer). (A1)

The Indians of Santa Clara Valley had a great abundance of food. The creeks or rivers, many now no longer extant, ran year-round all teaming with trout , steelhead and salmon. Trips to Alviso Bay, Pescadero or Santa Cruz provide clams, mussels and wild duck. (A2)

The Mission has an abundance of water obtained from the River of Nuestra Senora de Guadalupe which is about a quarter league distance from the houses. In this river good trout are caught in the summer. The Thamien-Socoistaca site at the confluence of the surface arroyo and the Rio Guadalupe was a hillock of laurel trees, tall & straight at hand for building. The Mission Creek, with its ready supply of surface water for cooking and cleaning , was attractive at any point. In the full but not yet overflowing Rio Guadalupe, there were salmon for the fishermen. (A3)

Anadromous fish were an important part of aboriginal subsistence economies in northern Native California. Of the five species of Pacific salmon the two most abundant in the freshwater systems of Northern California were the Chinook and silver or coho. Chinook are normally more prevalent in larger rivers while the coho frequents smaller streams. In addition to these salmon species, large populations of steelhead are seasonally common in nearly all coastal streams of California. The king and silver salmon entered the rivers and streams in the latter half of the year and the king salmon also entered the larger rivers in the spring, creating an important spring-fall cycle of runs. Chinook ranged as an important resource as far south as Monterey Bay and could be found in smaller numbers as far south as the Ventura River. (A4)

King, Chinook or Quinnant salmon run in the spring and fall, Silver or Coho Salmon and Chum or Dog salmon run in the fall. Every Northern California stream of whatever kind has more or less of these fall run salmon. The southern limit for Chinook salmon is the Ventura River. The flesh of spring run fish is pink and the fall run white which makes fall run fish pretty much worthless for canning. It is not generally possible to capture any species in large numbers until they enter the rivers and streams. (A5)

"Quinnant or Chinook Salmon Range from Alaska to California, southward to the Ventura River, ascending all large streams and are especially abundant in the Columbia and Sacramento Rivers." "Dog Salmon ranges from Kamchatka to San Francisco Bay ascending all streams in the fall and spawning no great distance from the sea." Silver or Coho salmon are abundant from San Francisco Bay to Alaska ascending small streams in the fall to no great distance." (A6)

Historical migration routes for salmon and steelhead are shown leading to the South Bay. Most South Bay streams, including the Guadalupe River, Los Gatos Creek, Stevens Creek and Coyote Creek are shown as Silver salmon and steelhead streams. (A7)

1890 photo of O.A. Hale of San Jose with catch of about 24 salmon. Some salmon identified as probably Chinook by Dr. Stacy K. Li, others believed to be coho. (A8)

San Jose Mercury News article dated March 1988 documents two fishermen fishing for salmon in the Guadalupe River and stated they had been doing so for over a dozen years, (since the mid 1970's). The article also indicates that Linda Ulmer, CA Dept. of Fish & Game biologist stated they had evidence confirming a viable run of salmon and steelhead in the river. (A9)

A1) "A River Ran Through It ....The Cultural Ecology of the Santa Clara Valley Riparian Zone," Erin M. Reilly, Research Manuscript Series No. 3, Dept. of Anthropology and Sociology, Santa Clara University, Santa Clara, CA, 1994.

A2) "Lo, the Poor Indian" of the Santa Clara Valley, Ralph Rambo, Historical Booklet, University of Santa Clara, Santa Clara, CA Orrandre Library, 1967

A3) "The Five Franciscan Churches of Mission Santa Clara 1777 to 1825," Arthur Dunning Spearman, S. J., National Press, University of Santa Clara, Santa Clara , CA

A4) "Ritual Management of Salmonid Fish Resources in California," Sean L. Swezey & Robert F. Heizer, The Journal of California Anthropology

A5) "Salmon and Trout of the Pacific Coast" Dr. David Starr Jordan, President Stanford University, Thirteenth Biennial Report of the State Board of Fish Commissioners of California for 1893.

A6) "Fishes of North America," Jordan and Evermann, Bulletin 47. United States National Museum.

A7) "Fish and Wildlife Resources of the San Francisco Bay Area" John B. Skinner, CA Dept. of Fish & Game, 1962.

A8) "San Jose, California's First City," E. Beilharz and D.O. DeMers Jr.

A9) "Fish Discovery Spawns Protest," Pat Dillon, San Jose Mercury News, March 18, 1988

APPENDIX B

Numerous long time residents and fishermen in the South Bay area also provide accounts of observing and catching all three species of fish, Chinook and coho salmon and steelhead trout, in south bay waters from the early 1900's until the 1970's. From the 1980's until the present day, Chinook salmon and steelhead trout have be observed, captured and photographed in major South Bay waterways, in increasing numbers over the past ten years.

Mr. & Mrs. Joseph Altieri long time area residents reported seeing salmon behind their home in Los Gatos Creek most wet years for at least the past 30 years. (B1) Mr. Kenneth Anderson, long time resident and fisherman stated that he observed steelhead trout and silver salmon in the Guadalupe River for many years and used to catch loads of steelhead in his younger days. " He indicated that the steelhead were so plentiful you could almost walk across the river on their backs." Mr. Anderson provided the Natural Heritage Institute a written deposition on these facts in support of the South Bay Salmon & Steelhead Restoration Coalition's legal actions. (B2) Sandy Christiansen, long time resident on St. John Street, San Jose stated he has observed salmon and steelhead, from the windows of his home, in the Guadalupe River for as long as he can remember as they migrated upstream and spawned in the area. (B3) Brian Collins a long time resident of the area stated that he and his friends would go down to Los Gatos Creek when he was attending Del Mar High School in the 1970's and observed and caught spawning salmon in the fall with his bare hands. (B4) Frank Cucuzza long time resident of the area and fisherman stated he could remember catching steelhead in the Guadalupe River as a little boy and throughout his young adult life. He has also observed spawning salmon in Los Gatos Creek from the deck of his home on the creek for many years. Mr. Cucuzza reported he caught several steelhead just above the Taylor Street Bridge several years ago in the same location he used to fish as a boy. Frank serves on one of the SCVWD's Flood Control Zone Planning Committees. (B5) Mr. George Garbarino, 85 year old resident and fisherman of San Jose lived in a house next to the Guadalupe River and owned and operated a Machine Shop on Los Gatos Creek. Mr. Garbarino stated he caught loads of silver salmon and steelhead trout in Los Gatos Creek, just behind his business from the 20's to the 60's and continued catching steelhead until several years ago when mobility problems kept him off of the creek's steep banks. He stated he observed Chinook salmon in the Guadalupe River over this time period and they seemed to prefer the larger river. He indicated that in his younger days he would sometimes use a pitch fork to collect salmon out of the creek. Mr. Garbarino provided the Natural Heritage Institute a written deposition on these facts. (B6) Bud Heft, long time resident reported that he observed steelhead in the Guadalupe River for as long as he can remember. (B7) Mr. Ken Lawrence, long term area resident, stated he fished the Guadalupe River for steelhead thirty to forty years ago. He is a retired local police officer and currently sits on the Board of the CA

Dept. of Fish & Game. He indicated he recalls seeing his father, who just passed away, catching salmon in the Guadalupe River when he was very young. (B8) Mr. N. Morano, long time area resident on St. John St. reported observing large salmon in the Guadalupe River system for many years, at least since the early 1970's, although he was not able to identify if they were Chinook or coho. (B9) Robert von Raesfeld, long time resident, attorney and well known fly fishing instructor, stated his family came to the San Jose area in the 1800's and his father and grandfather were also both avid fishermen. He learned to fish from his father who in turn learned from his grandfather. When he was young his family lived near the Guadalupe River at Vermont and Chestnut Streets. He said most South Bay waterways had salmon and steelhead runs. He said his father taught him how the distinguish between coho and Chinook salmon (black vs light gums and the number of rays on the anal fin). He said that the Guadalupe River had runs of both coho and Chinook salmon and that he frequently caught 20 lb Chinook salmon in the 40's and early 50's from Taylor Street all the way up to the Almaden area. He used to fish the area waters intensely all the way down to Morgan Hill where he now resides and every vacation he took was a fishing vacation. He indicated his father told him many stories of catching loads of salmon in the 20's and 30's and that they were so plentiful that people used to either pitch fork or shovel them out of the river and load them in sacks for fruit tree fertilizer. (B10) Mr. Clyde L. Ritchie, 80 year old resident, indicated his family came to the area from Italy and first lived in Woodside. He use to fish the area waters extensively and all of the area streams had steelhead and salmon runs. He used to catch steelhead and silver salmon in San Francisquito Creek and the Guadalupe River System in the 30's and 40's. He said that the Guadalupe River also had runs of Chinook salmon which were very large in wet years. (B11) Paul Stark stated that his grandfather, John DeBona, a long time resident and retired area sheriff's officer, now living in Eugene Oregon, used to tell him about the large runs of salmon in the South Bay waterways back in the 20's & 30's. He recalls the numerous photos his grandfather showed him of the fish. He said that they were so plentiful that people used to pitch fork them out of the waterways. (B12)

B1) Altieri, Joseph, 1280 Dr., San Jose, CA, personal conversations and meetings with L.M. Johmann, (GCRCD) 1995, 1996.

B2) Anderson, Ken, San Jose, personal meetings and conversations with L.M. Johmann (GCRCD) 1995. Interview and deposition with NHI attorney, M. Wolfe 1996.

B3) Christiansen, St. John Street, San Jose, CA, personal conversations and meetings with L.M. Johmann, R. Castillo, 1994, 1995, 1996, 1997 & GCRCD Board of Directors, 1995.

B4) Collins, Brian, Campbell, CA, personal meeting with L.M. Johmann (GCRCD) 1996.

B5) Cucuzza, Frank, 1309 Glen Eyrie Ave. San Jose, personal conversations and meetings with L. M. Johmann & R. Castillo, (GCRCD) 1995, 1996, 1997, 1998.

B6) Garbarino, George, 34 Autumn Street, San Jose. (business address) personal conversations and meetings with L. M. Johmann and R. Castillo 1996, 1997. Interview and deposition with the GCRCD Board members and NHI attorney, M. Wolfe 1996.

B7) Heft, Bud, near Ironwood Court, San Jose, personal conversations and meetings with L.M. Johmann and R. Castillo 1995.

B8) Lawrence, Ken, San Jose, personal conversations with L.M. Johmann (GCRCD) 1996.

B9) Morano, N, St John St., San Jose, personal meetings and conversation with L.M. Johmann (GCRCD), 1995

B10) Von Raesfield, Robert, 900 Lafayette St. Suite 706, Santa Clara, CA, personal conversation with L.M. Johmann (GCRCD), 2000.

B11) Ritchie, Clyde, 1448 Willowmont Ave. San Jose. personal conversation with L.M. Johmann (GCRCD), 2000.

B12) Stark, Paul, San Jose, personal meetings and conversations with Roger Castillo and L.M. Johmann. 1990 to 2000.

APPENDIX C

The results of genetic studies on 1993 and 1994 Guadalupe River Chinook salmon clearly indicate these were **not** fish of hatchery origin. In addition, the most experienced genetic experts in the state indicate that it is not possible to identify a Chinook salmon's heritage via genetic testing, at this time.

Genetic studies performed by Dr. Jennifer Nielsen, on Guadalupe River Chinook salmon samples in 1993 and 1994, submitted by Silichip Chinook and the CA Dept of Fish & Game, showed the fish carrying **unique mtDNA haplotypes** that could not be matched with any known hatchery populations. (C1)

Both the GCRCD and Shilichip Chinook volunteers have observed, photographed and video taped hundreds of Chinook salmon over the past ten years in the Guadalupe River System. They have never seen even one fish that had been tagged by a hatchery or had its adipose fin clipped which could indicate it was of hatchery origin. (C2)

In 1996 Dr. Kenneth Jones, President of Genetic Identification Services, stated categorically "that no one could tell where a Chinook salmon came from via genetic testing as there was not a sufficient data base established to do so. He indicated that the only thing that could be told was where a fish was not from, which is what Dr. Nielson reported in 1995." (C3)

In July 2000, Dr. Bernie May, Head of Univ. of Calif. Davis Aquatic Biology Labs. indicated that the most detailed genetic studies on SF Bay area salmon were being performed at their Bodega Bay Marine Lab. He indicated that the "Bodega Bay studies use far more accurate methods of testing than the work done by Dr. J. Nielsen." (C4)

In July 2000, Dennis Hedgecock, Head of the Cal. Davis Bodega Bay Marine Lab. salmon study effort stated "they could not tell where a individual or small population of Chinook salmon came from via genetic testing. They could only tell if the fish were winter, spring or fall run. He indicated there were little, if any, genetic differences between hatchery or none hatchery fish." (C5)

C1) Dr. Jennifer L. Nielsen (Hopkins Marine Station – Stanford Univ.), letter to L. M. Johmann (Evergreen Resource Conservation District), dated 5/12/95. Federal Register 1999 Vol. 64, No. 179, Sept. 16, Rules & Regulations, Page 50401; Nielsen, J.L. 1995 Hopkins Marine Station, Stanford University, Mitochondrial DNA frequency Distributions in Chinook Salmon from the Sacramento-San Joaquin Basin and Guadalupe River, 1992-1994; Nielsen, J. L. et al, report to California Department of Fish & Game, Variation in Chinook Salmon Spawning runs in Central Valley, CA, 1992-1997).

C2) First hand observations (photographs and video tape) by Roger Castillo and other members of Silichip Chinook Salmon and Steelhead Restoration Group (1989 to Present). First hand observations (photographs and video tape) by L.M. Johmann and other members of the Guadalupe Coyote Resource Conservation District (1994 to Present).

C3) Dr. Kenneth Jones (President, Genetic Identification Services, Chatsworth, CA), personal telephone conversations with L.M. Johmann. (ERCD) 1994, 1995, 1996 & 2000.

C4) Dr. Bernie May (Head, University of California. Davis Aquatic Biology Lab.), personal telephone conversation with L.M. Johmann (GCRCD) July 21, 2000.

C5) Dr. Dennis Hedgecock, (Head, University of California, Davis Bodega Bay Marine Lab. salmon study effort), personal telephone conversations and e-mail with L.M. Johmann (GCRCD) July 21, 2000 thru 2001.

APPENDIX D

LOWER GUADALUPE RIVER FLOOD PROTECTION PROJECT

PUBLIC COMMENT SHEETS

Name Lawrence M. Johmann

WHAT ARE YOUR BIGGEST ISSUES WITH ANY OF THE ALTERNATIVES?

A. Alternatives for the Lower Guadalupe River Reach

1. No Action
2. Dredging Alternative
3. Bypass Alternative
4. Flood Wall Alternative
5. Channel Modification - Concrete
6. Channel Modification - Alternate Materials
7. Channel Modification - Combination of Concrete and Alternate Materials

A 1. The river is currently not functioning in a natural manner. It is not stable and is not in its stable form (proper geometry) for the existing land form and valley slope. Sedimentation problems will continue unless situation is corrected.

A 2. Dredging is costly and will only provide a temporary fix. It will need to be repeated on a regular basis. This option will destroy existing aquatic habitat and not satisfy project environmental goals.

A 3 The option may be acceptable but only if done correctly, however, it will be costly. It should be done in conjunction with a river restoration component.

A 4 This option would be costly, environmentally degrading, increase flood damage potential and pose a public safety hazard. It would not alleviate the problem of sedimentation build up in the area and would lead to the destruction of existing habitat. It would not satisfy project environmental goals.

A 5 This option would be costly, environmentally degrading and pose a public safety hazard. It would not alleviate the problem of sedimentation build up in the area and would destroy existing habitat. It would not satisfy project environmental goals and result in high maintenance costs and degrade recreational opportunities.

A 6 Same problems as 5.

A 7 Same problems as 5.

B. Components for the Alviso Baylands Reach

1. Setback Levee West of Alviso Slough
2. Aquire Flood Easements on Salt Ponds
3. Dredging Alviso Slough
4. Levee Construction Confining Flows within Alviso Slough
5. Combination of Options
6. Tidal Restoration of Baylands

B 1 Costly to construct and maintain and unnatural

B 2 Acceptable

B 3 Costly and environmentally damaging. Will only provide a temporary fix which will have to be continuously repeated.

B 4 Very costly, would increase flood damage potential and pose a public safety hazard. It would also be environmentally damaging. Confining flows will cause more problems.

B 5 Insufficient information to comment

B 6 Acceptable (perhaps best option)

What would you like to see protected in this reach of the River?

Riparian and aquatic habitat, public access for fishing and small watercraft recreation, the restoration of the river to a stable natural functioning system.

Please describe any flood protection suggestion not currently displayed.

1. Set back levee upstream of the railroad bridge
2. Geomorphic river restoration
3. Combination of 1 & 2 preferred
4. Routing storm water discharge from impervious areas to holding areas or directly to the bay (lower flash discharge to the river)

How would you define the project as a success?

The re establishment of the river's natural function (stable river form). The achievement of all stated project environmental goals (enhancement of aquatic and wildlife habitat). The protection or enhancement of water based recreational opportunities. Zero to low maintenance requirements and increased flood protection at a reasonable cost.

MINUTES
SANTA CLARA VALLEY WATER DISTRICT
SPECIAL BOARD OF DIRECTORS MEETING
October 2, 2001
(Paragraph numbers coincide with agenda item numbers)

A special meeting of the Board of Directors of the Santa Clara Valley Water District was held in the Alviso Branch Library and Community Center, 5050 N. First Street, Alviso, California at 7:30 p.m., on October 2, 2001.

1. Board members in attendance were J. Judge, R. Kamei, R. Santos, G. Zlotnick, and T. Estremera, Chairperson presiding, constituting a quorum of the Board. Directors Sanchez and Wilson were absent.

Staff members in attendance were D.J. Chesterman, J. Fiedler and L. Keller.

2. Chairperson Estremera opened the meeting for public comment on any subject not on the agenda. There was no one present who wished to speak.

3. Chairperson Estremera opened the public hearing on the draft Environmental Impact Report and Engineers Report for the Lower Guadalupe River Planning Study--Guadalupe River from Union Pacific Railroad, Alviso to Interstate 880. An explanation is contained in the attached agenda memorandum.

Chairperson Estremera read into the record the attached statement explaining that the purpose of the hearing was to take public comments and that there would be no action by the Board at tonight's meeting. Chairperson Estremera appointed Mr. David Chesterman, Assistant Operating Officer, Office of Guadalupe Watershed Manager, as Hearing Officer.

Mr. Chesterman reviewed the history of the planning study, and the public hearings and community meetings held to date. He explained the order in which presentations would be made, the process by which written comments to the Draft EIR would be responded to, and gave instructions for filling out and submitting public speaker cards.

Mr. Dave Von Rueden, CH2M Hill, reviewed the project background, goals, and conceptual and recommended alternatives.

Mr. Steve Centerwall, Jones and Stokes Consulting, reviewed the project impacts, mitigation and benefits and explained the steps that would be taken before commencement of construction.

Mr. Chesterman acknowledged the attached written comments from Ms. Barbara Cook, Department of Toxic Substances Control, and Mr. Felix Lopez, Santa Clara County Roads and Airports Department and opened the hearing for public comments.

Mr. Russ Robinson, South Bay Yacht Club, thanked the Board for bringing the project to the Draft EIR stage and read the attached comments into the record.

In response to Mr. Robinson, Mr. Chesterman explained that an emergency operations plan is currently being developed for maintenance of pump stations during emergency flooding conditions.

Mr. Bob Douglas, Cargill Salt, addressed the Board relative to the relationship between the District and Cargill Salt. He stated opposition to the proposed plan to use the salt ponds as a floodwater overflow basin and confirmed Cargill's willingness to work with the District to identify solutions that protect the residents and businesses of Alviso. Mr. Douglas provided the attached comment letter from Ms. Anne E. Mudge, General Counsel, Cargill Salt. 1

In response to Director Santos, Mr. Douglas clarified that he supports the proposal set forth in the local cooperative agreement with the U.S. Army Corps of Engineers, and would be willing to consider support of the proposal submitted by Retired Director, District 3, Dr. Robert Gross, which calls for construction of a channel that flows directly to the bay. 2

Mr. Chesterman noted that several of the comments that would be heard would relate to the hydraulics of the system and confirmed that a smaller work/study focus group on hydraulic issues would be set up to address some of these issues.

Ms. Libby Lucas, Los Altos, confirmed that she would like to be involved in the hydraulic issues work/study session and expressed her opinion that the capability of off-stream storage upstream of the project had not been investigated as thoroughly as it should. Ms. Lucas requested that the Board look at how storm water is handled in the downtown area and requested that the Board consider recessing some streets for use as temporary flood diversions, as was done with the breakaways at Route 87 during the flood of 1995. 3

In response to Ms. Lucas, Mr. Chesterman clarified that the project provided continuous recreational trails where depressed maintenance roads run under bridges.

Mr. Chesterman read into the record a question submitted by Mr. Mark Wheeler, Crawford Consulting, relative to grade stabilization within the channel between Highways 101 and 880.

In response, Mr. Chesterman requested that Mr. Crawford attend the upcoming hydraulics issues work/study session.

Louise McCracken, Alviso Rotary Club, addressed the Board relative to the need for a comprehensive emergency evacuation plan for residents of Alviso. 4

Mr. Chesterman explained that the District's focus is to prevent flooding, monitor water levels, and provide various sandbag stations, while evacuation procedures and notification of residents lies within the jurisdiction of the city.

Mr. Taher Basma, City of San Jose, confirmed that an emergency evacuation plan is available through the City of San Jose Emergency Operations Department, Office of Emergency Services. 5

Dr. Robert Gross, 1200 Hope St., #55, addressed the Board relative to the project's economic benefit ratio and the need to clear habitat areas. He expressed his support for a channel that flows straight through to the bay, stated his opposition to city operation of emergency pump stations, and requested that the Board consider using temporary bridges during non-winter months and installing pumps in the community areas of Alviso. 6

Dr. Gross suggested that permitting agencies be invited to public hearings, encouraged the Board to pursue off-site mitigation opportunities with Caltrans and San Francisco International Airport, and suggested the Board look at the successes of the Lower Coyote Creek Project as a model for Lower Guadalupe. 7

Director Santos requested that Dr. Gross come back with more information on the cost of his proposal, encouraged the public to write to their representatives to ask for more funding in the area, and clarified that the Board is working towards installation of pumps in the Alviso community area.

Mr. Chesterman noted that Dr. Gross' proposal is discussed and evaluated in the Draft Environmental Impact Report.

Ms. Lurdes Rivera-Murphy, 1315 Michigan Ave., addressed the Board relative to tully weed growth in reaches A-G and requested that the Board expedite work and install new pumps. 8

In response to Ms. Rivera-Murphy, Mr. Chesterman clarified that the District is working with the County of Santa Clara for a joint funding agreement for improvements to the marina and provision of flood protection in the marina area that is consistent with the project. Mr. Chesterman confirmed that the project includes plans for a combination of mowing and growth control of tully weeds, as well as removal of sediment.

Chairperson Estremera explained the impact of the regulatory agency permitting processes and encouraged the public to write congress requesting that the processes be streamlined.

Mr. Chesterman acknowledged a speaker card received from Mr. James T. Harper, Realtec Properties, expressing concern that increased levee heights without additional drainage improvements will create economic hardships for adjacent property owners, and requesting clarification on coordination efforts with the City of San Jose relative to local drainage improvements. 9

Mr. Chesterman confirmed that the District is working with the Cities of San Jose and Santa Clara on an emergency action plan for the operation of pumps, taking into consideration that activation of pumps is not a threat to the integrity of the levees.

Mr. Robinson addressed the Board relative to the regulatory process and the need for maintenance that goes beyond mowing and includes digging three or more feet to remove the root mass as proposed in the Draft EIR. 10

Mr. Chesterman confirmed the project includes a combination of dredging and growth control, and that excavation of root balls would be performed to an extent that is economically and hydraulically beneficial. He clarified that vegetation removal would be completed this year in the upper reaches, up to 1,500 feet upstream of Tasman Road.

Mr. Robinson noted that overgrowth in the reaches below the Gold Street Bridge has created a habitat for Norwegian dump rats, which in-turn affects the ability of native species to successfully nest. Mr. Robinson requested that the Board consider an approach that would bring the area back to its natural condition and expressed opposition to utilizing Cargill Salt Ponds to capture floodwaters. 11

Director Santos encouraged the public to support the project and Mr. Chesterman confirmed that there would be a comprehensive maintenance plan after project completion.

Mr. Tom Lane, Alviso, invited the Board to tour the lower river reaches so that they could witness the problems that have been identified by the community and Director Santos encouraged the Board to accept Mr. Lane's offer. Mr. Chesterman confirmed that he had toured the lower reaches with Mr. Lane, found the tour to be valuable, and stated his availability to attend with the Board. 12

Mr. Chesterman thanked everyone for their attendance, advised anyone interested in attending the hydraulics work/study session to contact Mr. Dennis Cheong, Associate Civil Engineer, Hydraulic/General Engineering Unit, and returned the meeting to Chairperson Estremera.

Chairperson Estremera encouraged the public to participate in the work/study; stated the Board's commitment to identify enhancement opportunities; encouraged Dr. Gross to continue to pursue the enhancement opportunities he has identified in his correspondence to the Board; and thanked the public for their attendance.

4. There was no other business.

5. Chairperson Estremera adjourned the meeting at 9:30 p.m. to the next regularly scheduled meeting.

Lauren L. Keller

Clerk/Board of Directors

Approved:

Date:

Chapter 3
Master Responses

Introduction

A review of the comments made on the Final EIR revealed that some comments were made frequently, demonstrating a common concern among those submitting written comments and those speaking at the public hearing. In some cases, the array of similar comments about a particular topic provided more clarity about a particular issue than any single comment. To allow presentation of a response that addresses all aspects of these related comments, Master Responses have been prepared for those topics that were raised in a number of comments from agencies, interested groups, and members of the public. These Master Responses are intended to allow a well-integrated response that addresses all facets of a particular issue, in lieu of piecemeal responses to individual comments, which may not have portrayed the full complexity of the issue.

The use of a Master Response is in no way intended to minimize the importance of the individual comments. In fact, Master Responses are used as a way to highlight some of those issues that appeared to be of particular importance to those making the comments.

The Master Responses indicate where changes to the text of the Final EIR have been made. Page references for text changes reflect the location of the change in the Final EIR text.

Master Response A: Definition of Boundaries of the Lower Guadalupe River Flood Protection Project

A number of comments expressed concern about limiting the LGRP area from the Interstate 880 (I-880) crossing to the Union Pacific Railroad (UPRR) bridge crossing because of a desire to include the Alviso Slough reach as part of the project.

As presented in the project description on page 1-1 of the Final EIR, the purpose of the project is to modify previous flood-control improvements initiated in 1982 and reevaluated in 1995 on the lower Guadalupe River. These modifications would restore the design capacity of the existing flood-control channel and ensure that the channel would convey the design floodflow of 481 cms (17,000 cfs). Therefore, it was a logical choice to use the boundaries of the 1982 project for the LGRP.

To understand how the boundaries of the LGRP segment of the Guadalupe River flood control projects were delineated, it is necessary to review a brief history of flood control along the river.

- The Flood Control Act of 1941 authorized the Corps to investigate flood control on Coyote Creek and its tributaries, including the Guadalupe River.
- In 1945, the Chief of Engineers of the Corps authorized the survey of all streams flowing into San Francisco Bay south of Dumbarton Bridge.
- The Corps' study began in 1948, was suspended during the Korean War, and resumed in 1955.
- The Corps' study was shelved in 1961 because of lack of local support for a multipurpose reservoir, which was determined to be the only feasible alternative.
- In 1963, the District implemented the first phase of improvements to the lower Guadalupe River from Trimble Road to UPRR; the channel was straightened and enlarged to convey 12,000 cfs. A further enlargement of the channel to convey 25,000 cfs was planned but not implemented.
- The Corps resumed its study in 1963 and completed it in 1968, at which time it was placed in deferred status because none of the alternatives were found to be cost effective.
- The Corps study resumed its study in 1972 at the request of local sponsors because of changes in the study area, including urban development, which could produce a feasible project.
- In 1978, the District developed a concept report for increasing the conveyance capacity in the lower Guadalupe River to 22,000 cfs.

- The Corps began investigating a downtown project from US 101 upstream to Park Avenue, where the urban density was such that a federal project would be feasible.
- The Corps was investigating the Alviso area tidal flooding downstream of SR 237 as part of its *San Francisco Bay Shoreline Study*.
- In 1982, the District revised its lower Guadalupe River project to convey the Corps' 100-year design flood of 17,000 cfs and to include the reach between Trimble Road and US 101.

The Local Cooperating Agreement (LCA) with the Corps for the Downtown Guadalupe River Project in 1983 established the limits of the District's 1982 lower Guadalupe River project. The administrative record associated with the 1982 focused Environmental Impact Report (EIR), shows that the District reaffirmed its commitment to the Corps to complete a flood protection project between Trimble Road and UPRR (later US 101 to UPRR) to ensure continued funding of the Downtown Guadalupe River Project.

In 1993, as the design of the Corps' Downtown Guadalupe River Project progressed, the District reaffirmed its commitment to the Corps to provide flood conveyance capacity downstream of US 101. After the 1995 floods, the District reevaluated the performance of the lower Guadalupe River project and found that the flood conveyance capacity had been substantially diminished from the 1982 channel design by accumulation of sediment and vegetative growth.

In 1998, the District determined that the lower Guadalupe River did not have the conveyance capacity to convey the 17,000 cfs design floodflow specified in the LCA. The District initiated the Lower Guadalupe River Planning Study and developed the Proposed Project to meet its obligations under the LCA. Based on the history of the lower Guadalupe River projects, the Corps' Downtown Guadalupe River Project, the LCA with the Corps, and previous CEQA analyses, it was logical to set the boundaries of the LGRP to include the river between I-880 and the UPRR.

The project description chosen, however, has not in any way been used to shortchange the level of analysis that is required to adequately evaluate the impacts of the project on the baylands, their mitigation, and alternatives thereto. Numerous potential alternatives downstream of the UPRR bridge were evaluated, including tailwater suppression in Alviso Slough, construction of larger levees along Alviso Slough, dredging Alviso Slough, construction of new setback levees adjacent to Alviso Slough in portions of the salt ponds, and construction of a new dredged channel adjacent to Alviso Slough. Additional alternatives for the Baylands Mitigation Measure that were also considered include: 1) raising Alviso Slough levees from the UPRR bridge to the Coyote Creek confluence; 2) acquiring a flood easement in Cargill Pond A8W; 3) connecting Guadalupe River to Guadalupe Slough through the southern portion of the USFWS refuge; 5) removing salt ponds and levees between Alviso Slough and Guadalupe Slough; and 6) opening up the entire salt pond area to San Francisco Bay. The Proposed Project and recommended mitigation measures are determined the most feasible.

The project definition and potential alternatives were included from the beginning of the CEQA process, including the NOP that was sent out in April 2000.

The Final EIR discloses both the direct physical impacts of the Proposed Project and alternatives to the Proposed Project and the indirect impacts that could result from physical changes in the environment and operation of the flood conveyance channel. The Final EIR also recognizes that although the Proposed Project would contain the design flood event and reduce the potential for flooding adjacent to the Guadalupe River, it could result in significant flooding impacts downstream of the UPRR bridge in the baylands. As discussed previously, induced flooding in the salt ponds was determined to be inconsequential in the 1983 Negative Declaration. The current LGRP hydraulic analysis uses unsteady flow methods and more conservative tidal conditions, and considers other sources of flooding not considered by the previous analysis. The analysis shows that under LGRP and cumulative conditions, substantially more water would enter the salt ponds than under existing conditions, thereby resulting in a determination of a significant impact. Four mitigation measures (collectively called the Baylands Mitigation Measure) that were feasible from a technical perspective are recommended in the Final EIR to reduce the flooding impacts of the Proposed Project to a less-than-significant level.

The District believes that the recommended Proposed Project and impact analysis contained in the Final EIR meets both the letter and spirit of CEQA and the State CEQA Guidelines. The Proposed Project would provide desperately needed flood protection for the Cities of San Jose and Santa Clara and the community of Alviso in a timeframe that meets the District's LCA with the Corps and benefits the District's constituency.

The LGRP has been proposed specifically to meet the requirements of the LCA. Project objectives presented on page 1-6 of the Final EIR indicate that flood protection goals should be met in a manner consistent with the LCA goals. The Corps has indicated that the LGRP is consistent with the provisions of the LCA (see letter dated May 15, 2002, from the Corps to the District [appendix H]).

Master Response B: Provision of 100-Year Flood Protection

A number of comments asked for clarification that the LGRP would convey the 100-year floodflow to San Francisco Bay.

The LGRP will convey the Corps' 100-year flood hydrograph with an instantaneous peak flow of 17,000 cfs to the San Francisco Bay. The design of LGRP improvements uses the Corps' calculation of the design flood for the Downtown Guadalupe River Project to ensure that the LGRP meets the District's LCA with the Corps. The Downtown Guadalupe River Project and the LGRP together will reduce the threat of flooding to Downtown San Jose and North San

Jose, approximately 3,300 residential units, 66 public properties, and 951 commercial and industrial properties.

The 100-year design flood hydrograph for the Guadalupe River basin was based on hydrologic studies conducted by the Corps in the late 1970s (U.S. Army Corps of Engineers 1977) and application of the Corps' HEC flood hydrograph model, HEC-1 (U.S. Army Corps of Engineers 1991). The Corps' studies included assumptions on the operation of the Lexington Reservoir based on the District's reservoir operation plan. The District does not intend to change the operation plan and has signed the LCA with the Corps ensuring that the District will continue to operate or manage the reservoir consistent with past practices. Both the Downtown and Upper Guadalupe River projects depend on the same District reservoir operation plan. The Corps' design flood hydrograph was calculated to have an instantaneous peak flow of 17,000 cfs at the St. Johns Gaging Station. Hydraulic modeling for the LGRP applied the Corps' instantaneous peak flow to the lower Guadalupe River at I-880 to calculate water surface elevations on the lower Guadalupe River under existing and Proposed Project flooding conditions.

The LGRP will also accommodate 1,350 cfs of local drainage inflows while maintaining an acceptable level of freeboard meeting Corps and FEMA standards. The District has prepared an interior drainage analysis (Northwest Hydraulic Consultants 2002) that was conducted in coordination with the Cities of San Jose and Santa Clara. The analysis shows that the estimated total drainage inflows from both cities during the design flow event is 1,350 cfs. Based on the design assumptions for the project, the analysis shows that the Proposed Project (assuming 17,000 cfs floodflow) could accommodate an additional 1,350 cfs of pumped inflows and gravity drainage from the cities' storm drain system during the peak riverine flow in the river within Corps and FEMA freeboard standards. An EOP is therefore determined to not be necessary for the design flood event. However, for flood events greater than the design floodflow, an action plan is still needed. The District's EOC is coordinating with the cities' offices of emergency services to develop a countywide EOP to address for conditions when the design freeboard is exhausted and coordinated pumping operations will need to be appropriately monitored and managed via an EOP and by the cities.

Master Response C: Request for Setback Levees and Baylands Restoration

A number of comments requested that the District reconsider an alternative that would include setting back lower Guadalupe River levees to reestablish a more natural river condition and restore the salt ponds to a tidal marsh condition.

The beginning of chapter 2 of the Final EIR summarizes a detailed alternatives screening analysis that is presented in the LGRP Engineer's Report. The project team evaluated a comprehensive range of alternatives, including lower Guadalupe River setback levees. An analysis of the potential to set back levees along the lower Guadalupe River found that to be effective in meeting the flood protection objective, levees would need to be set back more than 50 meters (164 feet) on both sides of the river. The cost of land acquisition alone is conservatively estimated at approximately $100 million. Additional costs would be required to relocate a substantial number of residences and businesses adjacent to the lower river. Based on the findings of this analysis, levee setbacks would be infeasible in terms of the capital costs, economics, or schedule.

The alternatives development process also considered whether a package of flood protection elements when combined could meet the basic project objectives. To accomplish this, alternatives were screened using a 3-stage screening process (Santa Clara Valley Water District 2001). Screening criteria included design criteria; cost and timing criteria; environmental criteria; technical, operational, and jurisdictional criteria; and consideration of public acceptance.

In the first stage screening, alternatives were analyzed to determine those that would not reasonably meet the overall project purpose or objectives, either separately or in combination with other alternatives. Alternative design concepts ranged from watershed-oriented solutions involving flood storage capacity in upstream reservoirs to more traditional in-channel capacity modifications. Table 4-3 of the Engineer's Report summarizes 9 conceptual alternatives that were considered during this screening stage. They include: the No Project Alternative, Nonstructural Alternative, Upstream Flood Storage Alternative, Fluvial Geomorphological Alternative, Change in Upstream Reservoir Alternatives, Watershed Transfer Alternative, Off-Stream Storage Basin Alternative, New Channel Construction Alternative, Channel Modification Alternative, and Channel Bypass Alternative. Full descriptions of these alternatives are presented in chapter 4 of the LGRP Engineer's Report.

Based on this first-stage screening, components of the Channel Modification Alternative and Channel Bypass Alternative were carried forward to the second stage screening process because they generally met the project purpose and objectives and were judged to generally meet the cost and timing criteria. The Nonstructual Alternative was considered infeasible because it does not meet the project purpose or schedule requirements, would exclude levee rehabilitation, and could result in undue hardships on businesses during storm events. The Upstream Floodwater Storage Alternative was not selected because of the substantial riparian ecosystem impacts and high construction costs involved. The Fluvial Geomorphological Alternative was not carried to the second stage screening because it would require purchase of 263 hectares of expensive land, relocation of numerous businesses and residents, and reconstruction of numerous lower Guadalupe River bridges; it was found to be infeasible because of the potentially high cost. The Change in Reservoir Operation Alternative was screened out because it would require complicated and potentially costly water supply operational scenarios. Lastly, the Watershed Transfer Alternative would not meet design floodflow and capital cost criteria because the neighboring Coyote Creek watershed cannot accommodate additional floodflows.

Various off-stream storage basin alternatives were considered infeasible because of high capital costs and limited undeveloped land in the lower Guadalupe River watershed. The New Channel Construction Alternative (from UPRR to the San Francisco Bay) was not forwarded to the second stage screening because it does not meet the basic project purpose, could not meet the timing and capital cost criteria, and would potentially result in substantial environmental impacts. (Santa Clara Valley Water District 2001.)

Second-stage screening involved evaluating 9 channel modification alternatives and combinations of alternatives and the Channel Bypass Alternative. Channel modification elements that were considered include channel bank modification, levee paving, levee raising, floodwalls, setback levees, bridge crossing modifications, channel excavation/dredging, sediment management, and vegetation management. The second-stage screening concluded that levee paving, bridge modification, sediment management and vegetation management were not able to meet design criteria as stand-alone alternatives. Levee paving does not provide sufficient downstream flood conveyance capacity and bridge modifications would provide only a slight hydraulic improvement. Sediment and vegetation management alone would not meet design criteria for flood conveyance capacity, but were judged to be alternatives that could be combined with other alternatives.

Channel bank modification, levee raising, floodwalls, and channel excavation/dredging were judged to potentially meet the project purpose and objectives in a reasonable time period for a reasonable cost. The Channel Bypass Alternative was carried through to the third-stage screening because it is able to meet the project purpose and objectives and design criteria, even though its cost is high and it would require considerably more time to construct than other alternatives.

Based on the first- and second-stage screening analyses, a short list of 4 alternatives was identified as meeting the design flood and freeboard criteria and minimum requirements for cost, timing, environmental impact, and public acceptance. Alternatives carried to this screening stage include the Channel Bypass Alternative, Channel Bank Modification Alternative, Floodwall/Raise Levee Alternative, and Dredging Alternative. The floodwall and levee raising alternatives were combined into one alternative because of the similarity of these treatments and because these elements both met design requirements.

Third-stage alternatives received a thorough review and were judged in detail against the screening criteria. This process resulted in the Dredging Alternative being removed from consideration in the Draft EIR because of the amount of environmental impacts that could occur in the lower Guadalupe River and concerns about the costs for annual dredging and off-site habitat mitigation when compared to the flood control benefits. All remaining alternatives were carried forward for analysis in the Draft EIR as feasible and practicable alternatives. In addition, other alternatives that had previously been screened from consideration because they were judged not to be feasible stand-alone alternatives (such as the off-stream storage basin alternative, bridge modification alternative, and sediment and vegetation management alternatives) were reconsidered with the selected alternatives to attempt to provide the best combination of alternatives for consideration in the Draft EIR. The sediment and vegetation management alternatives were then recombined with the 3 remaining alternatives because they provide added hydraulic benefits and are necessary to establish and maintain future channel capacity. The off-stream storage basins alternative was considered too expensive and infeasible because limited available basin sites are available in suitable locations adjacent to the lower Guadalupe River. The bridge modification alternatives were reconsidered, but only raising the SR 237 eastbound bridge was determined to have sufficient hydraulic benefit to carry forward for analysis in the Draft EIR.

Once feasible and practicable alternatives were selected for the Draft EIR, the District determined that the Floodwalls/Levee Raise Alternative—a package of ideas that includes floodwall construction, levee raising, Highway 237 replacement, and vegetation management and sediment management—was the most feasible alternative from a capital cost, timing, and environmental impact/mitigation cost perspective. This alternative was identified as the Proposed Project and the remaining 3 alternatives (No Project, Channel Bank Alternative and Channel Bypass Alternative) were analyzed as alternatives to the Proposed Project. A potential future project for salt pond acquisition and restoration of baylands would require a greater effort and is beyond the scope of the LGRP. A project of this magnitude would require the involvement of multiple agencies; the District is willing to participate in such an effort. The Baylands Mitigation Measure recommended for the Proposed Project is considered to be compatible with and will not preclude the potential future restoration efforts in Alviso Slough and Cargill's salt ponds.

Master Response D: Reasonable Range of Alternatives in an Environmental Impact Report

A number of comments were received suggesting that the Draft EIR did not contain a reasonable range of alternatives and that the EIR should be expanded to evaluate additional alternatives.

The District considers the range of alternatives to be reasonable and consistent with CEQA. The LGRP planning process included a detailed and systematic evaluation of a large number of potential alternatives to meet project objectives. This screening analysis, as presented in chapter 4 of the LGRP Engineer's Report, systematically assessed the probability that various project alternatives would meet alternative screening criteria. Those alternatives that passed through the 3-phase screening process were evaluated in the Final EIR. Please also refer to the summary of this screening process in Master Response C for specific discussion about the screening process, alternatives considered, and process for selection of the alternatives analyzed in the Final EIR. The District has also conducted an extensive scoping and public involvement process to solicit comments on the range of alternatives and content of the Final EIR. This process, as described in the LGRP Engineer's Report and summarized in the Final EIR, has exceeded the amount and type of public involvement required under CEQA. The State CEQA Guidelines indicate that an EIR need not consider every conceivable alternative but must be limited to ones that generally meet the project objectives, are feasible, and would avoid or substantially lessen at least 1 of the project's significant environmental effects. The range of reasonable alternatives must be selected and discussed in a manner that fosters meaningful public participation and informed decision making (State CEQA Guidelines, Section 15126[f]). The environmental review process for the LGRP Final EIR meets this requirement.

Numerous alternatives for the Baylands Mitigation Measure that were considered include: 1) raising Alviso Slough levees from the UPRR bridge to the Coyote Creek confluence; 2) acquiring flood easements in Cargill Pond A8W; 3) connecting Guadalupe River to Guadalupe Slough through the southern portion of Cargill Pond A8W; 4) constructing a flood basin through Cargill's ponds to the USFWS refuge; 5) removing salt ponds and levees between Alviso Slough and Guadalupe Slough; and 6) opening up the entire salt pond area to the bay. The Proposed Project and recommended mitigation measures are most feasible. Further, mitigation measure options for flooding downstream of the UPRR (i.e., the Baylands Mitigation Measure) were evaluated as part of the mitigation development process, which meets the requirements of CEQA and the State CEQA Guidelines.

Master Response E: Potential for Stranding Salmonids in Salt Ponds

A number of comments were received stating that the Proposed Project would likely result in a substantial increase in salmonid stranding in the salt ponds downstream of the LGRP area.

The District disagrees with the commentors' conclusions regarding the potential for the Baylands Mitigation Measure to increase the risk of entrapping migrating salmonids. As indicated on page 3G-21 of the Final EIR, impacts of this mitigation measure on migrating chinook salmon and steelhead would be minimal because the ponds would be flooded on only 0.1% of the total days occurring during the 6-month rainy season. The frequency of flooding in ponds would be similar to the current frequency of flooding in the salt ponds. The volume of flooding in the salt ponds during infrequent events would be greater than under existing conditions (15–21% for the design flood), potentially resulting in the entrapment of more fish in the salt ponds. Potential entrainment of salmonids by pumping the salt ponds after the flood event (Mitigation Measure HH-3) will be prevented by screening the pumps in a manner consistent with the NMFS Fish Screen Criteria for Anadromous Salmonids.

However, under existing conditions in downtown San Jose (figure 3-7), floodflows greater than 221 cms (7,800 cfs) would break out of the channel and flood into San Jose and Santa Clara, potentially entrapping salmonids. On a volumetric basis, 33% of the total flood waters (20 million cubic meters [16,000 af]) would leave the channel upstream of the LGRP. Although a portion of this water may return to the river by overland flow, much of it will be returned to the river by the cities' pump stations. Flood waters returned to the river may again overtop the river banks and flow into Alviso or the salt ponds.

Implementing the Proposed Project with the Baylands Mitigation Measure in place would result in approximately 16 million cubic meters (13,400 af) of flood water breaking out of the channel and flooding the salt ponds; however, breakouts upstream would be eliminated. The result would be a net decrease in floodwater breakout of 17% compared to existing conditions. Even under cumulative conditions, with local pump operations, the overall volume of floodwater breakouts would be reduced by approximately 12% compared to existing conditions. Therefore, project improvements would have a net benefit on fish populations that could currently be stranded in areas adjacent to the Guadalupe River, outside of the levees, where there is no possibility for recovery.

The text on pages 3G-20 and 3G-21 in the Final EIR has been revised to provide greater clarity with respect to the potential for fish stranding resulting from the Baylands Mitigation Measure.

Master Response F: Inadequate Mitigation of Impacts on Riparian and Wetland Vegetation

A number of comments indicated that the mitigation approach identified in the Draft EIR for compensating for impacts on riparian and wetland vegetation is inadequate and that greater compensation is required.

The Final EIR (page 3E-24) recommends implementing Mitigation Measure V-1 to replace or compensate for the temporary and permanent loss of riparian and wetland vegetation associated with LGRP construction and channel maintenance impacts. Mitigation Measure V-1 has been revised based on comments received from the resource agencies that stated the mitigation measure did not provide adequate compensation for project effects. Mitigation Measure V-1 has been revised based on the identification of additional on-site riparian mitigation areas not previously identified in the Draft EIR.

In the Draft EIR, Mitigation Measure V-1 proposes that riparian impacts would be mitigated at 0.5:1. This mitigation ratio was suggested because the relatively low-quality riparian habitat that would be affected would be replaced by a higher quality habitat that would result in an increase in habitat functions and values. All of the riparian mitigation identified in the Draft EIR was to occur in reach A.

The resource agencies did not feel that a 0.5:1 mitigation ratio provided adequate compensation for riparian habitat impacts. The District agreed to provide 3:1

mitigation for construction-related riparian impacts and has identified additional on-site riparian mitigation areas in reaches A, B, and C, as identified below.

The mitigation approach identified in Mitigation Measure V-1 of the Final EIR has been revised as it relates to mitigating impacts on riparian habitat. This revised approach would result in a net increase in riparian habitat because riparian impacts would be mitigated at a ratio of approximately 3.2:1. This approach would also result in an increase in functions and values for both wildlife and fisheries resources by creating more than 1,524 meters (5,000 feet) of SRA overhead vegetation. Most of the existing riparian vegetation that would be affected by the LGRP is found on or near the toe of the existing flood-control levees and primarily provides habitat for terrestrial species.

Riparian Mitigation

The District will provide on-site and off-site mitigation for riparian vegetation impacts associated with levee construction and sediment and vegetation removal activities associated with the LGRP. The LGRP will result in the loss of approximately 1.67 hectares (4.13 acres) of riparian vegetation, including approximately 0.87 hectares (2.16 acres) of riparian habitat impacts from levee construction activities and approximately 0.79 hectares (1.97 acres) from sediment and vegetation management activities. Impacts from levee construction activities will be mitigated at a 3:1 ratio in the on-site riparian mitigation areas. Impacts from sediment and vegetation management activities that are identified to be performed as part of SMP will be included in the SMP mitigation package.

The District will provide approximately 2.80 hectares (6.90 acres) of on-site riparian mitigation to compensate for levee construction impacts on riparian habitat. On-site mitigation areas are those mitigation areas located within the levees of the LGRP.

On-Site Riparian Mitigation Areas

The on-site mitigation areas in reaches A, B and C will provide approximately 2.80 hectares (6.90 acres) of riparian mitigation for levee construction activities. This represents an approximate 3.2:1 mitigation ratio. Overall, the on-site mitigation area in reaches A, B, and C would increase the functions and values for terrestrial species by providing a more diverse canopy structure and by providing a near-continuous corridor of riparian vegetation adjacent to, or in proximity to, the low-flow channel. Many of these mitigation planting areas would also increase the functions and values of the existing habitat for aquatic species by providing overhead and instream SRA cover for aquatic species, particularly in reach A.

The mitigation proposed has been specifically coordinated and made to be consistent with mitigation strategies presented under the District's multiyear

SMP. These SMP approaches continue to be valid and are directly applicable to the Guadalupe River routine sediment and vegetation management program.

Reach A Mitigation Area

The reach A mitigation area will provide approximately 0.76 hectare (1.88 acres) of riparian mitigation between U.S. Highway 101 and Airport Parkway. The reach A mitigation activity will consist of 2 distinct planting approaches. The first approach involves planting riparian vegetation within the 4.6-meter (15-foot) -wide low-flow buffer area between Airport Island Bridge and Airport Parkway. This approach will provide approximately 1.66 acres of streamside vegetation planting areas that will provide approximately 1,433 meters (4,700 feet) of SRA overhead cover vegetation. Native tree, shrub, and vine species will be planted in the streamside planting areas.

The second planting approach includes setting back the existing east bank between U.S. Highway 101 and Airport Island Bridge. The depressed bench planting area will include a low bench adjacent to the proposed depressed maintenance road and the slope of the setback levee. Native riparian tree, shrub, and vine species will be planted on the low bench and native shrub and herbaceous species will be planted on the east bank slope. Both planting surfaces will also be seeded with an erosion control seed mix.

Reach B Mitigation Area

The reach B mitigation area will provide approximately 0.90 hectare (2.23 acres) of riparian mitigation between Trimble Road and U.S. Highway 101. The reach B mitigation activities will consist of setting back approximately 400 meters (1,312 feet) of the existing west bank levee between stations 14+050 and 14+450. The setback levee planting area will include a low bench between the proposed sediment management area and the lower slope of the setback levee. Native riparian tree, shrub, and vine species will be planted on the low bench and native shrub and herbaceous species will be planted on the lower portion of the setback levee slope. Both planting surfaces will also be seeded with an erosion control seed mix.

Reach C Mitigation Area

The reach C mitigation area will provide approximately 1.13 hectare (2.78 acres) of riparian mitigation between Montague Expressway and Trimble Road. The reach C mitigation activities will consist of planting native riparian vegetation in several areas within the existing riparian corridor that are currently dominated by herbaceous vegetation (e.g., fennel, poison hemlock) and nonnative woody vegetation, (Himalayan blackberry, black walnut, weeping willow). The reach C planting areas vary in proximity to, and elevation above the river. Site-specific planting mixes consisting of native riparian tree, shrub, vine, and herbaceous species have been identified for each of the planting areas.

Wetland Mitigation

The District has recommended a reasonable and feasible mitigation approach to LGRP impacts on tidal and nontidal wetlands. The District has committed to wetland restoration, open to tidal habitat, in its recently purchased Pond A4. The District's Pond A4 will serve as the mitigation site for all impacts to wetlands and some of the other waters of the United States associated with project construction as well as for impacts associated with routine sediment and vegetation maintenance. The District is currently planning for and designing wetland restoration activity for Pond A4, in close coordination with the regulatory agencies. Pond A4 covers 121.4 hectares (300 acres). Restoration is expected to begin in 2007. The District is proposing to use a ratio of 2:1 to compensate for permanent impacts and a ratio of 1:1 to compensate for temporary impacts on wetland resources and other water of the United States. The Final EIR indicates that some out-of-kind mitigation of impacts on nontidal wetlands would be required. Out-of-kind mitigation on nontidal wetlands would occur at a ration of 2:1 (two to one). This approach has been taken because no feasible on-site wetland mitigation sites are available on the lower Guadalupe River and sites immediately adjacent to the river are extremely limited because of existing and planned urbanization. The Pond A4 mitigation site was chosen, in part, because of its proximity to potential impact areas on the lower Guadalupe River. Please refer to chapter 3E, "Vegetation," of the Final EIR.

Chapter 4

Responses to Comments

This section contains the responses to both written and oral comments received by the District during the 45+ day public comment period (August 22–October 12, 2001) on the Draft EIR. Copies of the written comments received by the District are included in chapter 2. The comment letters and public hearing comments are organized within this section as follows:

- letters commenting on the Draft EIR (letters 1–27) and
- comments received at the public hearing.

Responses to comments are individually numbered in sequence, corresponding to the numbering assigned to comments within each comment letter or public hearing comment. The full text of written comments and comments from the public hearing are included in chapter 2. In addition, to make reading the responses to comments easier, a page reference to the changes made to the Final EIR is given. The summary does not substitute for the actual comment; the reader is urged to read the full original text of the comments. The responses are prepared in answer to the full text of the original comment, and not to the abbreviated summary.

Comment Letter 1—National Marine Fisheries Service, Patrick J. Rutten (October 12, 2001)

Response to Comment 1-1

The Proposed Project would substantially increase the volume of floodwater spilling to salt ponds west of Alviso Slough (an increase of 16%–22%) and thus would substantially increase the risk of entrapment and loss of migrating salmonids in the Alviso Baylands. The proposed drawdown of flooded ponds through the use of pumps poses the risk of entraining salmonids. The District should consider an alternative in this area that includes acquisitions or easements on the remaining privately owned ponds, which would allow for breaching of levees. Restoration in this area would restore wetland functions, avoid fish entrapment, and reduce the need for pumping.

The District agrees that under the Proposed Project the volume of floodwaters directed to the salt ponds west of Alviso Slough would increase. As shown in table 3-5 of the Final EIR, the LGRP would result in increased flood volumes (approximately 14% greater) entering the salt ponds to the west of Alviso Slough. However, the Proposed Project would improve flooding conditions compared to existing conditions because flood flows would be contained within the lower Guadalupe River channel, thus reducing potential salmonid stranding. Under existing conditions, lower Guadalupe River floodflows would overtop the levees and spill into the City of San Jose, flow down North First Street to the community of Alviso, New Chicago Marsh, and salt ponds east of Alviso Slough. Please refer to Master Response E. Regarding potential entrainment of salmonids, pumps will be screened in a manner consistent with the NMFS Fish Screen Criteria for Anadromous Salmonids, thereby preventing potential salmonid entrainment (see Mitigation Measure HH-3).

The potential use of Cargill ponds for future restoration has been considered, and the District has discussed possible participation in future plans for baylands restoration with the USFWS Don Edwards National Wildlife Refuge staff. The District is also coordinating with Cargill to ensure that the recommended Baylands Mitigation Measures are compatible with Cargill's salt production operations. The future restoration of salt marsh functions in the Baylands is being considered by a number of entities; however, it could not be implemented within the time frame or for the capital cost currently required under the District's local cooperative agreement with the Corps. Also, the Baylands Mitigation Measure has been recommended partly because it is expected to be compatible with potential future Baylands restoration efforts.

Response to Comment 1-2

Diversion and dewatering operations during construction should comply with the District's best management practices (BMPs) to maintain habitat connectivity of the stream and prevent mobilization of fine sediments. Diversions should maintain adequate fish passage through the project area, obviating the need for fish trapping.

The LGRP has incorporated all of the required District BMPs as environmental commitments, as presented in the Final EIR starting on page 2-27. Measures to avoid and minimize project effects during LGRP construction include implementing a vegetation protection plan, stormwater pollution prevention plan (SWPPP), erosion and sediment control plan, spill prevention and response plan, soil management plan, hazardous and toxic materials contingency plan, and construction-area fish management program. Implementing these environmental commitments would collectively reduce potential construction effects on the stream environment, including mobilization of fine sediments, and minimize potential impacts on fisheries resources.

The District would endeavor to maintain adequate fish passage conditions during construction by maintaining contiguous flows, avoiding the creation of vertical drops in excess of 6 inches, and maintaining suitable water velocities (i.e., 8 fps or less) and water depths (minimum of 1 foot). Primary migration periods for anadromous species occur during fall, winter, and spring. Although the District's Proposed Project largely avoids the need for construction activities in the low-flow channel, some potential exists for construction that requires the use of cofferdams to divert streamflow around the construction site. For this reason, the District is proposing to limit construction activities in the low-flow channel to the late-spring to early-fall period (May 1–October 15) to avoid construction impacts during the primary migration periods. In the event that in-channel construction requiring the use of cofferdams or stream dewatering is needed before June 15, the District will divert flow into a bypass channel or culvert to maintain downstream passage. In the event that in-channel construction occurs after September 1, the District will ensure that cofferdams are constructed to allow for uninterrupted passage of migrating adults around construction sites and dewatered stream reaches.

If site conditions make the use of bypass channels or culverts impractical, such as if bypass channel construction results in the removal of substantial amounts of riparian vegetation, the District may use pumps to divert flow around construction sites. Pumps will be screened in a manner consistent with the NMFS Fish Screen Criteria for Anadromous Salmonids. The use of pumps will be restricted to the June 15 to September 1 period. By limiting in-channel construction and stream dewatering to the May 1 to October 15 period, maintaining adequate fish passage conditions to the extent practicable, screening pumps, and restricting pump use to the June 15 to September 1 period, the District will avoid and minimize construction effects on rearing juvenile chinook salmon and steelhead, thereby avoiding the need to trap fish.

Response to Comment 1-3

Use of pumps to divert streamflow should be avoided unless pumps are screened.

The Final EIR (appendix A) has been modified on page 2-32 to state that whenever pumps are used to dewater stream segments, the pumps will be screened according to the National Marine Fisheries Service's (NMFS's) screening guidelines. The District will endeavor to minimize the use of pumps for diverting streamflow; rather, bypass channels and culverts will be the preferred option for diverting streamflow at construction sites and for maintaining adequate conditions for fish passage. Because site conditions may make it impractical or undesirable to use bypass channels or culverts to divert flows, the District may need to install and operate screened pumps. However, the use of pumps will be restricted to the June 15 September 1 period to minimize impacts on migrating juvenile and adult chinook salmon and steelhead to the extent practicable. By maintaining flexibility in the methods used for flow diversion and in-channel construction, the District ensures that impacts on migrating fish are minimized while ensuring that construction is completed in the shortest time frame possible.

Response to Comment 1-4

NMFS recommends that upstream passage at cofferdams be provided for all *salmonids, not just chinook salmon, between September 1 and October 15.*

The Final EIR has been modified on page 2-33 to indicate that upstream passage for "chinook salmon and other salmonids" would be provided at cofferdams between September 1 and October 15. Futhermore, the Final EIR has been modified to include a requirement that only bypass channels be used to divert flow around cofferdams when cofferdams are installed between September 1 and October 15. By making the use of cofferdams conditional after September 1, the District ensures that adequate passage conditions for migrating adult salmonids will be maintained.

Response to Comment 1-5

Approximately 1% of the total SRA vegetation (4.65 acres) in the project area is proposed to be removed because of vegetation management or construction activities. In a highly modified and degraded stream system such as the Guadalupe River, the loss of any riparian habitat along the low-flow channel should be avoided. NMFS recommends a replacement ratio of 3:1. Likely increases in future vegetation coverage along the low-flow channel are not adequate replacement of vegetation lost as a result of project construction.

The 1.88 hectare (4.65 acres) of vegetation identified in the comment represents the total impact on riparian vegetation, not all of which provides SRA cover values. As indicated in the Final EIR, the Proposed Project has greatly minimized the impact on SRA cover. Approximately 44 meters (144 linear feet) of overhead SRA cover would be removed at bridge approaches. This amount of overhead SRA cover loss amounts to approximately 1.3% of the total 3,409 meters (11,184 linear feet) estimated to be found in the project area. The District is proposing to compensate for this loss of overhead SRA cover and riparian habitat by planting approximately 1.5 hectares (3.6 acres) of native riparian vegetation in reaches A and B. Replanting in reach A would result in the establishment of approximately 1,423 meters (4,666 linear feet) of overhead SRA cover, resulting in a mitigation ratio of approximately 32:1 (thirty-two to one) for overhead SRA cover affected by the Proposed Project.

Please refer to Master Response F in chapter 3 for additional information on proposed mitigation for impacts on the 1.88 hectares (4.65 acres) of riparian vegetation.

Response to Comment 1-6

Why is a 100- to 150-foot-wide riparian buffer specified along the low-flow channel for reaches D and E while a buffer of only 39.4 feet is proposed for reaches B and G? On what basis is the smaller figure selected?

The LGRP avoids impacts on riparian vegetation and associated overhead SRA cover to the extent practicable. In general, proposed buffer areas were designed to be as wide as possible. The width of proposed buffer areas adjacent to the low-flow channel in project reaches was based on several factors, including

- value of existing habitats (i.e., wetland, riparian) adjacent to the low-flow channel;
- location of the low-flow channel;
- need for sediment and vegetation removal activities in a given reach; and
- historical maintenance practices in a given reach.

Furthermore, it was determined that buffer areas should have a minimum width of 6 meters (19.7 feet) on either side of the low-flow channel to maintain existing streamside vegetation quality and in-stream habitat complexity (total width of 12 meters [39.4 feet] plus the width of the low-flow channel). Consequently, the width of proposed buffer areas in project reaches was determined by balancing the need to maintain adequate channel capacity for flood protection and the need to protect existing resource values. For example, in reach B, a 6-meter (19.7-foot) vegetative buffer on each side of the low-flow channel is proposed because of the narrow width of the flood control channel, the need for sediment removal and vegetation management to maintain hydraulic capacity, and the relatively low to moderate quality of existing riparian habitat in this reach. The total width of the riparian corridor would be 12 meters (39.3 feet) of buffer plus 7 meters (23.0 feet) of open water, or 19 meters (62.3 feet).

Conversely, larger buffer areas ranging from 30.5 to 45.7 meters (100–150 feet) in total width, including the width of the low-flow channel, are proposed in reaches D and E. Wider total buffer-area widths are possible in these reaches because there is sufficient channel capacity and more vegetation can be accommodated; less vegetation and sediment maintenance is required in these reaches because the channel capacity is greater; existing riparian habitat is of higher value in these reaches than in neighboring reaches; and the existing low-flow channel is wider.

Response to Comment 1-7

Clearing and snagging activities could reduce habitat complexity by removing large woody debris and cover. Such removal may adversely affect salmonid habitat.

The project is designed to avoid impacts on fish habitat, including impacts on associated riparian and SRA cover. Vegetation removal and debris clearing is only proposed in the immediate vicinity of bridges. Occasional clearing of snags and debris that pose a significant threat to human safety and/or the structural integrity of bridge crossings is currently performed on an emergency basis; assessment of need and subsequent clearing are conducted annually. Initial removal of any vegetation or SRA cover at bridges associated with the project, including clearing and snagging activities, will be mitigated as described in the Final EIR.

In addition, outside of the vegetation management area at bridges, the District is proposing to maintain a buffer area adjacent to the low-flow channel. The buffer area will extend for the entire 10.5-km (6.5-mile) segment of the lower Guadalupe River and is expected to maintain or increase existing habitat complexity in the low-flow channel where it borders the buffer area. Clearing and snagging activities are expected to affect only a small amount of the existing habitat in the river and will be mitigated as described in the Final EIR.

Response to Comment 1-8

Because the use of herbicides in the project area could adversely affect fish health and survival, these chemicals should be used for vegetation management only when hand and mechanical methods are not practical.

The LGRP Engineer's Report indicates on page 5-5 that herbicide application would include the use of only those herbicides approved by the U.S. Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation. The District would use herbicides only according to their label instructions. For example, Rodeo® is approved for use in aquatic areas, and Roundup® Pro is not approved for direct use in water or in areas where surface water is present. No vegetation management would be conducted within the established riparian buffer area, and management would be conducted only during summer low-flow periods, reducing the potential for introducing these chemicals into waterways and, therefore, adverse effects on fisheries. Because of the potential for adverse effects on fisheries from use of these products, the District would apply herbicides only when hand and mechanical methods are not practical.

Response to Comment 1-9

It is not clear why vegetation in reach A downstream of I-880 is proposed to be removed only to be replaced by structures providing a similar velocity slowing function. It is also not stated whether these rock weirs would withstand a floodflow of 17,000 cfs.

Vegetation maintenance below I-880 is needed to maintain channel capacity, freeboard requirements and a water surface elevation that will not impact the Corps' Downtown Project. Results of hydraulic modeling indicate the need for lower channel roughness values if the project is to contain the design flow of 481 cms (17,000 cfs). Currently, the first 61 meters (200 feet) of channel downstream of the I-880 bridge is armored with concrete cellular mattress (CCM) and supports only volunteer riparian species, including ruderal scrub and ruderal herbaceous vegetation. Table 3-15 of the Final EIR shows that the loss of vegetation in bridge transition zones in reach A (downstream of I-880 and upstream of U.S. 101) would be approximately 0.3 hectare (0.7 acre). Most of this vegetation would be ruderal scrub and ruderal herbaceous vegetation (0.2 hectare [0.5 acre]). No SRA cover and only 0.04 hectare (0.09 acre) of riparian forest (located away from the low-flow channel) would be affected by this activity.

The need for rock weirs is driven by the need to stabilize the channel bottom without compromising channel capacity and improve stream habitat. The weirs would be designed to withstand the design floodflow and not impede flows or reduce flow velocities. The proposed location of the 6 rock weirs in reach A includes segments of the channel in reach A where vegetation removal is *not* proposed and results of hydraulic analysis indicate that the channel bottom may downcut or scour in response to anticipated increases in channel velocities needed to convey the design flow through the I-880 bridge.

Response to Comment 1-10

Bank protection measures in reach A are likely to include use of concrete, which would preclude growth of a riparian canopy along the low-flow channel. Greater detail of the transition zone should be provided. NMFS recommends *that bioengineering techniques and material be used to the maximum extent practicable.*

Because of the need for low channel roughness immediately downstream of I-880 to ensure that LGRP water surface elevations do not impact the Corps' Downtown Project, only limited vegetation re-growth would be allowed in this area. The depth and velocities and the resulting sheer stresses downstream of I-880 at the design discharge exceed the limits of bioengineering solutions at that site. Vegetative stabilization alone is not appropriate for this location for the design hydraulic characteristics. Therefore, the design of the transition section incorporates self-maintaining rock weirs to control potential bed and bank scour. The rock weirs, however, will result in alternating pool and drop habitat complexes and will permit limited vegetative growth within the interstitial spaces in the rock blanket over time. Bank protection measures at other locations would not be located in the low-flow channel and are proposed only on the toe of the maintenance road and levee. Gabion basket construction for these over-steepened areas would also accommodate limited vegetative growth. A 6-meter-wide vegetation buffer would be maintained on both sides of the low-flow channel to allow for growth of overhanging riparian canopy.

Response to Comment 1-11

The District's BMPs (for erosion and sediment control) should be applied where possible instead of the less rigorous California Construction BMPs.

Comment noted. The District's BMPs will be applied.

Response to Comment 1-12

NMFS supports the SR 237 raised bridge feature of the Proposed Project because of fish stranding issues related to a bypass. However, the discussion of demolition of the SR 237 bridge and construction of a bridge replacement lacks sufficient detail to evaluate potential impacts on fish and fish habitat. More information is needed about the demolition methods and the potential for impacts on fish and fish habitat.

The Final EIR includes additional information on demolition methods and impact areas associated with reconstruction of the eastbound lanes of SR 237. This additional information shows that no substantial impacts on fish or fish habitat would result from construction in this area because bridge substructures would not be located in or near the low-flow channel, and because the District has committed to incorporating environmental commitments into project design, as indicated starting on page 2-27 of the Final EIR. Relevant construction measures include implementing a vegetation protection plan, SWPPP, erosion and sediment control plan, spill prevention and response plan, soil management plan, construction-area fish management program, and construction period limits, as outlined in the Final EIR.

Response to Comment 1-13

To ensure that traps are adequate to detect the presence or absence of out-migrating salmonids, NMFS would appreciate the opportunity to review and approve the proposed sampling program.

Comment noted, and any review of the proposed sampling program will be coordinated with the appropriate NMFS staff.

Response to Comment 1-14

NMFS recommends that passage be provided between the salt ponds and Alviso and/or Guadalupe Sloughs to ensure that salmonids do not become stranded and lost in the ponds as flows recede. Unscreened pumps should not be used to draw down pond water levels. NMFS recommends consideration of an alternative approach in this area that includes land acquisitions or easements on the remaining privately owned salt ponds combined with a plan to breach levees between the ponds and San Francisco Bay.

Regarding potential entrainment of salmonids, pumps will be screened in a manner consistent with the NMFS Fish Screen Criteria for Anadromous Salmonids, thereby preventing potential salmonid entrainment (see Mitigation Measure HH-3). Please refer to Master Response E in chapter 3 regarding fish stranding issues. Please also refer to Response to Comment 1-1 regarding potential future restoration of salt ponds.

Comment Letter 2—U.S. Environmental Protection Agency, Tim Vendlinski, Chief, Wetlands Regulatory Office

Response to Comment 2-1

We find the discussion of the "Summary of Alternatives Screening Process" to be incomplete. For watershed-oriented solutions to be found, a package of ideas must be considered that includes ideas listed on page 2-2 as well as others. Each option as a standalone alternative would be too costly and infeasible, but options pieced together might be found to be feasible.

Please refer to Master Responses C and D in chapter 3 related to project alternatives and the LGRP approach to developing a "package of ideas" to meet the project objectives. The LGRP screening analysis considered a number of combinations of watershed-oriented solutions and other regional approaches that were ultimately considered less feasible than the alternatives evaluated in the Final EIR. The Floodwalls/Levee Raise Alternative is a package of ideas that includes floodwall construction, levee raising, Highway 237 replacement, vegetation management, and sediment management and is considered the most feasible alternative.

Response to Comment 2-2

Indirect and cumulative impacts throughout the Guadalupe River watershed have not been discussed in the 2 National Environmental Policy Act (NEPA) documents that address the downtown and upper reaches of the Guadalupe River. EPA does not support the conclusion that the Proposed Project alternative would have no substantial impact in the volume and timing of freshwater flow to the south bay. EPA also states that floodwalls and levees often fail.

CEQA Guidelines Section 15130 (1) provides useful guidance about the appropriate scope of cumulative impacts in the following manner:

"As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR."

Using this Guidance the EIR presents an analysis of the cumulative impacts that past, present and reasonably foreseeable projects could have on the Guadalupe River. This cumulative analysis is focused on the reach of river encompassed by the Upper, Downtown, and Lower Guadalupe River Projects, but considers other projects that could potentially impact resources in the river. The LGRP cumulative analysis does not consider cumulative impacts that are not related to the types of impacts identified for the Proposed Project (such as watershed impacts) because the Proposed Project would not contribute to these types of impacts and they are not relevant to a determination of whether the Proposed Project's incremental impacts are considerable when combined with other past, present or reasonably foreseeable projects that could effect Guadalupe River resources.

To ensure that LGRP cumulative impact analysis is consistent with the certified EIS/EIS for the Downtown Guadalupe River Project and its cumulative impact analyses, the LGRP EIR presents the major conclusions from this recent cumulative discussion. The LGRP updates these analyses to reflect the combined impacts on Guadalupe River resources that could result from implementing the LGRP with upstream flood protection projects and other related projects that could potentially affect Guadalupe River resources. The LGRP EIR addresses all of the relevant cumulative impacts of "connected" flood protection projects and other projects that could potentially have cumulative impacts on the Guadalupe River.

The cumulative impact analysis in the Final EIR asserts that cumulative projects combined with the Proposed Project would not create significant cumulative hydrologic or hydraulic impacts because these projects would not change the channel maintenance flows, flow depths, and flow velocities. These conclusions are supported by the LGRP hydraulic analysis included in this FEIR and the LGRP Engineers Report. Likewise, the Proposed Project, when considered with other cumulative projects, would not result in substantial changes in the volume or timing of freshwater flows to the south bay and would improve flooding conditions by containing floodflows within the lower Guadalupe River channel. Under existing conditions, a design flood event would overtop lower Guadalupe River levees, causing flooding in the City of San Jose along North First Street, in Alviso, and in New Chicago Marsh and salt ponds east of Alviso Slough. During large flood events, the south bay becomes very low in salinity and takes many tidal cycles to return to normal salinity. Therefore, minor changes in the timing of floodflows from cumulative flood protection projects on the Guadalupe River would have no effect on downstream water quality.

The LGRP's relatively minor channel modifications and modest levee and floodwall improvements would provide an additional safety factor on the lower Guadalupe River, but would not result in a substantial increase in floodflow volumes or velocities because the project would not alter the basin's hydrology or create channel conditions that would greatly increase channel velocities. In most LGRP locations, levee raising is proposed only to address the need for adequate levee freeboard. The LGRP Sedimentation Study also shows that, for most of the lower Guadalupe River, stream down-cutting or excessive erosion is not a concern. In areas downstream of I-880 (reach A), rock weirs or grade control structures will be installed to protect the channel bottom and improve stream habitat diversity.

The District acknowledges that there is some residual risk with any flood protection structure. The LGRP is being designed to minimize the risk of levee failure so that, for a design flood event, the floodwalls and levees will not fail. The LGRP would improve the integrity of the levee at the Alviso weir location, making it less likely to fail at that point than under current conditions.

Response to Comment 2-3

EPA is concerned that preservation of riparian vegetation be incorporated into the project wherever possible. Because there would be a temporal loss of riparian vegetation, a mitigation ratio greater than 0.5:1 is warranted.

The District has held coordination meetings with representatives of EPA, USFWS, NMFS, RWQCB, and DFG regarding riparian vegetation mitigation needs for the LGRP and has revised Mitigation Measure V-1 to address agency comments. Please refer to Master Response F in chapter 3.

Response to Comment 2-4

EPA would like to see added measurements of the sediment deposited in the salt ponds. Baseline data on the existing levels of mercury in the salt ponds should be gathered.

Baseline data on the existing levels of mercury in the salt ponds are available. According to Cargill's Environmental Assessment (EA) for salt maintenance activities (Wetlands Research Associates 1994), existing background levels of mercury in sediments in South Bay marshes and sloughs are high. The EA indicates that U.S. Fish and Wildlife Service (USFWS) data on sediment background concentrations of mercury in 9 South Bay locations ranged from 0.24 to 0.84 µg/g, many exceeding the 0.4 µg/g TMDL level established by the San Francisco Regional Water Quality Control Board (RWQCB).

Under existing conditions, floodwater will spill into the salt ponds during high flow events, as witnessed in the 1995 flood at the existing low point of the levee. The proposed engineered weir over the low point of the levee is specifically designed so that it would not alter the existing spill pattern or frequency of spill during flood events.

It is anticipated that the mercury concentration in sediment entering the ponds with floodwaters will be the same as under existing and post-project conditions because the project does not generate mercury (see attachment A of this chapter for a summary of water quality data for the Guadalupe River). The proposed sediment removal activities under the LGRP would remove mercury-laden sediments from the LGRP area that could be transmitted to the salt ponds or the bay. Furthermore, it is anticipated that only very fine or suspended washload would be conveyed in the salt ponds with floodwaters as the elevation of the proposed weir is well above channel invert.

The finest portion of the washload would remain suspended for an extended period of time as circulation in the ponds caused by winds could continually resuspend these materials. The proportion of washload pumped out under Mitigation Measure HH-3 would be lower than that of the inflows because the proposed pumping of the salt ponds would occur no sooner than 2 weeks after a high storm event, allowing some material to settle. A floating intake valve would be placed on the temporary pumps so that water near the surface of the pond is pumped out. Mitigation Measure HH-3 has been revised accordingly (see page 3A-18 of the Final EIR). Mitigation Measure WQ-1 is an incremental and adaptive management approach that would first identify whether floodwaters from the Guadalupe River substantially contribute to mercury loading in the salt ponds. The sampling program would be coordinated with various agencies, including EPA.

Response to Comment 2-5

The Baylands Mitigation Measure might be better served by being described as addressing another reach of the flood protection project. EPA has outstanding concerns about the potential for mercury accumulation in salt pond sediments and the potential for fish stranding in the salt ponds and feels the Draft EIR needs to provide more detail about these issues to substantiate its finding.

Please refer to Responses to Comments 1-1 and 2-4 and to Master Responses A and E in chapter 3.

Comment Letter 3—Department of Toxic Substances Control, Guenther W. Moskat, Chief, Planning and Environmental Analysis Section

Response to Comment 3-1

We have determined that additional review by our regional office will be required to fully assess any potential hazardous waste related impacts from the Proposed Project.

Comment noted. As described on page 3D-1 of the Final EIR, the California Department of Toxic Substances Control (DTSC), through Division 20 of the California Health and Safety Code, is empowered to provide responses to releases of hazardous substances that pose a threat to public health or the environment. No changes were made to the Final EIR.

Comment Letter 4—Department of Toxic Substances Control, Barbara J. Cook, P.E., Chief, Northern California Coastal Cleanup Operations Branch

Response to Comment 4-1

Mercury, pesticides, metals, and asbestos materials sampling, removal, and handling need to be addressed in the soil management plan. Stockpiling issues need to be addressed and be in compliance with Section 25123.3 of the California Health and Safety Code. Please be aware that soils that are not determined to be hazardous wastes may pose an unacceptable risk to human health and the environment. We agree that further sampling should be conducted to determine whether this is an issue that will need to be addressed in the CEQA compliance document.

The District has investigated hazardous materials, such as metals, pesticides, and volatile organic compounds (VOCs), throughout the project area (Kleinfelder 2001); a summary of these investigations is presented in chapter 3D, "Hazards and Hazardous Materials," of the Final EIR. The soil management plan is described in greater detail in chapter 2, "Proposed Project and Alternatives," of the Final EIR. Although special handling of mercury-laden sediment is specifically mentioned in the Final EIR, the District is committed to a sampling program that evaluates all constituents of concern (page 2-30 of the Final EIR). The Draft Soil Management Plan (CH2M Hill 1994) is essentially the same plan adopted for the LGRP and the Upper Guadalupe River Flood Protection Project. This plan identifies specific sampling techniques, risk-based criteria, and handling procedures. The final plan will be updated with site-specific information from the hazardous materials investigations.

Although hazardous materials may be encountered during project construction, the purpose and goals of this project do not include cleaning up existing hazardous materials sites. If a substantial hazardous materials problem were to arise within the District's right-of-way (ROW) requiring more action than could be accommodated under the Soil Management Plan, work would be stopped and a site investigation/remedial action plan would be implemented. A separate environmental compliance document relating to that cleanup may need to be prepared. No changes were made to the Final EIR.

Response to Comment 4-2

If remediation activities include the need for soil excavation, the CEQA document should include an assessment of air impacts and health impacts, *identification of any applicable local standards that may be exceeded, transportation impacts from removal or remedial activities, and risk of upset for site accidents.*

If a substantial hazardous materials problem were to arise, work would be stopped and a remedial investigation/feasibility study would likely be initiated. A separate environmental compliance document relating to the cleanup would then be prepared. No changes were made to the Final EIR.

Response to Comment 4-3

DTSC can assist your agency in overseeing characterization and cleanup activities through our Voluntary Cleanup Program. DTSC requests that it be included in any meetings in which issues relevant to its statutory authority are discussed.

Thank you for the information regarding the urban cleanup program. At this time the District does not anticipate acquiring any lands outside of its existing ROW to implement the Proposed Project. The LGRP is not expected to involve remediation of hazardous materials in the project area. If hazardous materials are identified during construction, DTSC would become involved in the project. No changes were made to the Final EIR.

Comment Letter 5—California Department of Fish and Game, Robert W. Floerke, Regional Manager, Central Coast Region (October 4, 2001)

Response to Comment 5-1

What function will the Guadalupe River Watershed Planning Study fill in relation to the LGRP? Are modifications to the project alternatives identified in the Draft EIR likely or possible once it is adopted, based on the Guadalupe River Watershed Planning Study?

The Guadalupe River Watershed Planning Study is a separate but related study that recommends capital improvements on the Guadalupe River upstream of the Corps' Downtown Project from I-280 to Blossom Hill Road. The Downtown Guadalupe River Project EIS/EIR was certified in August 2001. The LGRP will provide floodflow capacity for both the Downtown Project and the Watershed Planning Project. The Guadalupe River Watershed Planning Study does not affect the final recommendation on the LGRP.

Response to Comment 5-2

The California Department of Fish and Game (DFG) would like additional information presented regarding the offstream storage option. Specifically, what process was used to evaluate these parcels and make the final determination that the offstream storage areas were unsuitable?

Offstream storage basins were evaluated as part of the alternatives screening process. No feasible basin sites were identified in the upstream area of the LGRP because potential areas adjacent to reach A are largely built out on the east and west sides of the river (San Jose International Airport to the west and commercial and industrial areas to the east). The District did evaluate potential use of a variety of other parcels farther downstream, but rejected these sites because they either were too small to accommodate up to 2,000 acre-feet (af) of flood storage or were already proposed for development. Acquiring all of the developed parcels and relocating businesses would be infeasible. The method for this investigation included calculating the minimum flood storage requirement, identifying acreage requirements for the storage areas, using aerial photographs, and working with City of San Jose (City) staff to locate potential sites. Please refer to Master Responses C and D.

Response to Comment 5-3

Why is Roundup Pro® used in channel maintenance activities, as identified in chapter 6 of the Engineer's Report? Specify in the maintenance program that it is acceptable for use in dry parts of the channel during the dry season, or when inundation is not expected. Otherwise DFG recommends that this herbicide use be considered an impact and discussed in the Draft EIR.

The District only uses herbicides according to the label directions and for uses approved by EPA and the California Department of Pesticide Regulation. Currently, the primary herbicides used by the District are Roundup® Pro and Rodeo®. Rodeo® is approved for use in aquatic areas and Roundup® Pro is not approved for application directly in water or to areas where surface water is present. The Final EIR has been modified to clarify methods and timing of herbicide application as requested by DFG. Herbicides will be applied only in the vegetation management areas identified in chapter 2, "Proposed Project and Alternatives," of the Final EIR during summer and fall months, only outside the low-flow channel buffer areas, and only during summer or early fall when the likelihood of inundation is relatively small.

Please refer also to Response to Comment 1-8.

Response to Comment 5-4

Selective vegetation removal in the upper portion of reach A (Airport Parkway to I-880), as identified on pages 6–10 of the maintenance plan, would occur outside of the Corps and California Department of Transportation (Caltrans) riparian and SRA planting areas in this reach. DFG is concerned that this could result in fragmentation of riparian habitat in this reach.

Both the Corps and Caltrans have mitigation sites in the upper portion of reach A (i.e., between Airport Parkway and I-880). Appendix G of the Final EIR identifies the location of the Corps and Caltrans mitigation areas. These mitigation sites will increase the overall habitat value of reach A above existing conditions. This increase will result from planting riparian vegetation in areas currently dominated by ruderal vegetation, thereby connecting isolated patches of existing riparian vegetation and increasing the SRA overhead cover vegetation in this reach.

The Corps mitigation planting areas consist of discontinuous, linear patches that are 4.6 meters (15 feet) wide and immediately adjacent to the low-flow channel. The Corps mitigation planting areas are located along approximately 2,377 meters (7,800 linear feet) of bankline. These areas will provide SRA overhead cover vegetation in locations dominated by ruderal vegetation. The Caltrans mitigation planting areas consist of discontinuous, linear patches that vary in width and are located on the mid- to upper banks on the east side of the river.

The area between the Corps and Caltrans mitigation sites varies between approximately 0 and 15 meters (0 and 50 feet), depending on the location.

Selective vegetation removal will occur in the upland areas between the Corps and Caltrans mitigation sites to maintain ruderal herbaceous vegetation at the design level. Ruderal scrub and riparian vegetation that naturally colonize the area between the mitigation sites will be removed to maintain hydraulic capacity within the channel. Because the Corps and Caltrans mitigation sites are relatively close to each other, and the canopies of mature vegetation will overhang the ruderal herbaceous areas, vegetation removal will not result in significant habitat fragmentation. Additionally, the total acreage of riparian vegetation will increase following implementation of this mitigation and will result in an increase in habitat value over existing conditions. The LGRP Proposed Project mitigation and monitoring plan, which includes an adaptive management approach, would further ensure that substantial habitat fragmentation would not occur.

Response to Comment 5-5

Vegetation management would have the effect of eventually converting areas of riparian forest or scrub to bare or ruderal habitat since natural recruitment would be halted because of proposed management practices. DFG feels that these losses should be added to the impact analysis, if they have not already been added, and mitigated at this stage.

The Final EIR assesses impacts of the LGRP actions on vegetation resources as they existed at the time the Notice of Preparation (NOP) was released in April 2000 and as shown in appendix G of the Final EIR. All losses to riparian forest and scrub from construction activities and sediment and vegetation management are accounted for in the calculation of habitat loss as shown in table 3-15 of the Final EIR. Treatment in vegetation management areas specifically excludes removal of mature riparian forest or scrub habitat that currently exists in the channel, except in bridge transition areas (30.5 meters [100 feet] upstream and downstream of bridge crossings), where removal of vegetation is required to ensure hydraulic performance of the channel. One of the objectives of the vegetation management program is to maintain current riparian areas (the extent of riparian forest and scrub growth areas) at their current locations. New riparian vegetation recruits in areas that do not currently support riparian vegetation would be removed to ensure that channel floodflow capacity is maintained and improved over the life of the project. Appendix D of the Engineer's Report describes the maintenance cycle and limits.

Response to Comment 5-6

This comment pertains to the maintenance practices proposed for the Corps mitigation site in the upper portion of reach A (Airport Parkway to I-880), as *identified on pages 6–12 of the maintenance plan. Describe in more detail why these vegetation management practices are taking place at this mitigation site.*

The Corps mitigation sites in the upper portion of reach A have been implemented as mitigation for the Corps' Downtown Guadalupe River Project, which will occur between I-880 and Interstate 280 (I-280). The vegetation management practices for these areas, as identified in the Final EIR for the LGRP, were obtained from the General Re-Evaluation and Environmental Report (GRR) for the Corps' Guadalupe River Project and will be implemented by the Corps. The GRR has been reviewed and approved by the resource agencies and the Guadalupe River Collaborative. LGRP maintenance would occur outside of the established mitigation areas.

Response to Comment 5-7

What is the potential for trapping of salmonids in the overflow ponds downstream of the railroad bridge? What steps would be taken to ensure that these fish are not killed when the ponds are pumped out?

Please refer to Master Response E in chapter 3 and Response to Comment 1-1.

Response to Comment 5-8

The proposed access/maintenance roads would require a substantial amount of initial clearing followed by ongoing maintenance. Has consideration been given to the use of more numerous access points in place of continuous in-channel roads?

Providing continuous maintenance roads in the channel is a critical element of the District's maintenance program in the lower Guadalupe River; use of such roads would provide for more efficient and cost-effective routine maintenance of vegetation and sediment in the river than increasing the number of access points, which might cause greater impacts on habitat. The continuous maintenance roads are floodways that will be kept clear of vegetation for carrying floodflows. Under the LGRP, existing maintenance roads would be used and connected by maintenance road segments under bridge crossings to reduce the need for maintenance vehicles to cross surface streets. New access roads would be added in reach G and downstream of the UPRR crossing (as part of the Baylands Mitigation Measure). In-channel access roads with bridge undercrossings would provide for a flexible vegetation maintenance program (i.e., use of a variety of mechanical and herbicide vegetation management actions where appropriate) and would be critical for required sediment excavation activities. These activities cannot be effectively conducted from the levee; multiple access points to the channel bottom could have greater impacts and would substantially increase the time required to access multiple treatment areas on approximately 10.5 km (6.5 miles) of the river.

Response to Comment 5-9

More detail appears necessary to justify the proposed mitigation of the loss of riparian mitigation. DFG does not recommend the use of a vegetation-quality evaluation to determine a mitigation ratio because the existing conditions occur in an artificial system (i.e., a managed flood control channel). DFG recommends that all riparian vegetation impacts be mitigated at a 3:1 ratio.

The District has held coordination meetings with representatives of EPA, USFWS, NMFS, RWQCB, and DFG regarding riparian vegetation mitigation needs for the LGRP and has revised Mitigation Measure V-1 to address agency comments. Please refer to Master Response F in chapter 3 and Response to Comments 1-5 and 6-1.

Response to Comment 5-10

"Xeric riparian forest" would be mitigated by implementing streamside riparian vegetation that would provide overhead and instream SRA cover. This mitigation would occur within a 15-foot band on either side of the river. This linear planting may have an adverse affect on terrestrial and avian wildlife because the affected habitat occurs in thicker habitat patches that provide more buffering.

Riparian impacts would not result in the loss or significant narrowing of thick habitat patches. With the exception of riparian vegetation in reach C, existing riparian habitat in the LGRP primarily consists of small to medium-sized patches of riparian habitat that are relatively narrow. In reach C, the existing riparian vegetation forms a nearly continuous corridor throughout the reach. Riparian impacts would include the complete or partial removal of small patches of riparian vegetation, the partial removal of large patches of riparian vegetation, or the removal of isolated trees or shrubs. Most of the riparian impacts in the LGRP area would affect vegetation located on the levees or near the toe of the levees, away from the low-flow channel. To offset potential impacts of habitat fragmentation, riparian impacts would be mitigated at a 3:1 ratio. Conversely, the riparian/SRA cover mitigation plan would decrease habitat fragmentation in the lower portion of reach A and in reach B by planting areas currently dominated by ruderal vegetation and connecting existing fragmented patches of riparian vegetation.

In reach B, the District would construct a 475-meter (1,558-foot)-long setback levee on the west bank. The resulting constructed floodplain and lower levee slopes would be planted with riparian vegetation. This planting would provide approximately 0.90 hectare (2.23 acres) of riparian vegetation and would improve the existing riparian corridor in this reach, which currently consists of isolated trees along the low-flow channel.

A riparian/overhead SRA cover mitigation plan is designed for the lower portion of reach A, between the Airport Island bridge and Airport Parkway. Although the riparian planting areas would be 4.6 meters (15 feet) wide, they would occur in a continuous band along both banks of the river and would connect existing patches of riparian vegetation in this reach. The unmaintained vegetation in this reach would include the 4.6-meter (15-foot)-wide planting areas on each side of the river and any vegetation growing over the channel. Lateral branches extending outside of the riparian planting areas (on the landward side of the riparian planting areas) would also be unmaintained. Occasional maintenance may be required to remove downed trees that could adversely affect stormflows.

Please also refer to Master Response F in chapter 3 and to Mitigation Measure V-1 on page 3E-24 of the Final EIR for additional information regarding riparian mitigation areas.

Response to Comment 5-11

*The removal of giant reed (*Arundo donax*) as mitigation for the loss of riparian vegetation is not recommended. DFG recommends the removal of* Arundo *and revegetation of cleared areas at a mitigation ratio of 3:1 (with native riparian vegetation). A maintenance plan should also be developed to identify how giant reed would be controlled and the affected sites revegetated and maintained.*

The removal of giant reed for impacts on 0.77 hectare (1.91 acres) of riparian scrub vegetation resulting from sediment and vegetation management as identified in the Final EIR is a specific impact and mitigation measure identified in the District's SMP. The impact and mitigation measure is identified in the LGRP Final EIR to publicly disclose all of the channel vegetation impacts and to ensure that adequate mitigation for vegetation resources occurs under LGRP and this related stream maintenance program. The District's SMP addresses guidelines for assessing whether individual giant-reed control sites require revegetation. In general, control sites will be monitored to determine whether 40% of native cover will develop within 3 years after control begins. If native cover is not developing within this timeframe and the site conditions indicate that vegetation, as opposed to open water or gravel bars, would have occurred at the location before colonization by giant reed, active revegetation of the site will be undertaken.

Response to Comment 5-12

DFG concurs that southwestern pond turtles could occur in the project area and recommends that mitigation be developed to minimize or eliminate impacts on any turtles that could be present.

Although southwestern pond turtles could occur in the project area based on their known regional distribution, the project area is considered to provide poor-quality terrestrial and aquatic habitat for this species. Implementing Mitigation Measure V-1, "Replace or Compensate for the Loss of Riparian and Wetland

Habitats," which also includes the restoration of ruderal habitats disturbed during construction, would minimize effects on southwestern pond turtles. Mitigation Measure W-2, "Provide an On-Site Biologist during Construction Phase," has been added to the Final EIR (see page 3F-24); this mitigation measure would also serve to minimize effects on southwestern pond turtles and reconfirm that they do not occur in the LGRP area. The LGRP has been designed to minimize permanent impacts (e.g., access ramps) within areas that could provide poor-quality terrestrial habitats for this species. The majority of construction-related impacts would be located on or at the toe of the existing levees, and these areas would be vegetated following construction. No additional mitigation is therefore required.

Response to Comment 5-13

Mitigation Measure W-1, "Avoid Nesting Raptors and Birds During Construction and Maintenance," should be expanded considerably. Nesting areas for any special-status birds, not just those for raptors, should be fenced, and a buffer zone of at least 250 feet should be provided around all raptor nests and should be identified during construction. Removal of raptor nests before the breeding season in construction areas, as stated in Mitigation Measure W-1, would have an impact on those species, which exhibit high levels of site fidelity. This section should be revised to identify all potential impacts and provide mitigation of each impact.

Mitigation Measure W-1 has been expanded to address potential impacts on nesting raptors, special-status birds, and migratory birds and provides mitigation actions for each impact. Because of the linear nature of the LGRP area and the location of the construction and vegetation and sediment management that will occur throughout the LGRP, it is not be feasible to provide at least a 250-foot buffer zone around all raptor nests and special status bird nests. Mitigation Measure W-1 has been revised to identify this situation and discuss mitigation options, should nests be located in the construction or vegetation and sediment management areas. Mitigation Measure W-1 applies to impacts expected to occur during the construction phase of this project. All flood protection project maintenance activities identified in the District's SMP will be mitigated under mitigation measures included in the SMP EIR.

Response to Comment 5-14

DFG recommends that specific burrowing owl mitigation be developed for potential impacts on burrowing owls.

A mitigation measure has been added that provides burrowing owl mitigation actions for any potential impacts on active burrowing owl nest sites. The actions include pre-construction surveys, provision of an on-site biological monitor during construction, and mitigation/avoidance actions to implement if nesting owls are found in the project area during the pre-construction surveys.

Response to Comment 5-15

The construction-area fish management program should be supported by more information. Only 1 mitigation measure is proposed for the entire project (Mitigation Measure F-1, "Provide Fish Passage Connection"). DFG recommends a substantial revision of the mitigation proposed for all biological impacts, providing considerably more analysis, detail, and justification.

The District is committed to developing an appropriate fish management program to ensure that critical fish habitat and migration is not affected during project construction. The Construction-Area Fish Management Program has been revised to clarify the specific times and methods that flow diversion and stream dewatering may occur when it is necessary to work in the low-flow channel. For example, lined bypass channels or culverts are the only method specified for diverting streamflow from May 1 to June 15 and from September 1 to October 15 to maintain adequate passage conditions for migrating juvenile and adult chinook salmon and steelhead. However, the District recognizes that site conditions may make it infeasible or undesirable to construct bypass channels or culverts and may need to use screened pumps to divert streamflow around construction sites. Because fish passage would be blocked in these situations, the District proposes that pumping be restricted to the June 15–September 1 period when migrating juvenile and adult Chinook salmon and steelhead are less likely to be present in the river.

Because the Proposed Project would largely avoid direct and indirect impacts on the low-flow channel, the potential for fisheries resources impacts, including impacts on special-status salmonids, from construction is considered less than significant. The District disagrees that a substantial revision of the mitigation proposed for all biological impacts with more analysis, detail, and justification is needed. The recommended mitigation measures for vegetation, wildlife, and fisheries resource impacts are feasible measures as defined under CEQA and would reduce potential environmental impacts of the Proposed Project.

The District will endeavor to maintain adequate fish passage conditions during construction by maintaining contiguous flows, avoiding the creation of vertical drops in excess of 6 inches, and maintaining suitable water velocities (i.e., 8 fps or less) and water depths (minimum of 1 foot).

Please refer also to Response to Comment 1-2.

Response to Comment 5-16

DFG recommends that a mitigation measure be added to provide at least 1 on-site biologist during the construction phase of the project.

The Final EIR has been revised to include a mitigation measure (Mitigation Measure W-2) that stipulates that 1 or more qualified biologists be present in sensitive construction areas to ensure that BMPs are being upheld and biological resources, including jurisdictional wetlands and sensitive species, are being protected during the construction phase of the LGRP. In addition, this mitigation measure stipulates that pre-construction surveys will be conducted to determine whether nesting raptors are present in the construction area. If raptors are found to be present, nest sites will be fenced to provide a buffer of 76.2 meters (250 feet) around the nest site, and work will be excluded from the buffer area until young are fledged. The width of the buffer may be less than 76.2 meters (250 feet) in some locations depending on the overall width of a project reach and the proposed construction or maintenance area. Please refer to Response to Comment 5-13 for site conditions that may limit the width of the buffer zone.

Comment Letter 6—San Francisco Bay Regional Water Quality Control Board, Paul F. Amato, Environmental Specialist

Response to Comment 6-1

The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) seeks opportunities with a project to avoid impacts to the full extent. Where impacts are unavoidable, impact minimization and appropriate mitigation are required.

The District agrees with the commenter and has been using the approach of avoiding impacts wherever possible in all of its capital improvement programs. The LGRP has been designed so that the proposed capital improvements would avoid important riparian and wetland resources on the lower 10.5 km (6.5 miles) of the Guadalupe River by proposing improvements to existing levees in the form of levee raises and floodwall construction. The Final EIR and Engineer's Report for the LGRP examined a number of channel improvement options to meet the LGRP's flood protection objectives and have shown in the screening process how the avoidance and minimization criteria were the key factor in arriving at the preferred alternative. The proposed combination of capital improvements and channel management activities would avoid impacts on and enhance lower Guadalupe River resources, and would provide a financially responsible project that can be constructed in a timely manner for the benefit of the public and adjacent properties. Impacted areas are strategically designed so that the locations have minimal impacts on sensitive habitats.

Please also refer to Master Response D in chapter 3.

Response to Comment 6-2

The SFBRWQCB would like to see further discussion pertaining to ways of combining setback levees, modified bridge crossings, and floodwater storage into a final project design. Reconnecting the Guadalupe River to the baylands should incorporate a tidal restoration component in addition to flood and storage capacity. Restoring the Guadalupe River delta would have a built-in mitigation component for possible impacts on wetlands.

Please refer to Master Responses C and D in chapter 3.

Response to Comment 6-3

The SFBRWQCB has concerns about direct construction impacts and cumulative impacts on the lower Guadalupe River that would result from the Proposed Project and project alternatives. Combining methods suggested in our NOP comment letter may be necessary to meet flood protection and environmental objectives.

Please refer to Master Responses C and D in chapter 3 and to Response to Comment 2-2.

Response to Comment 6-4

The amounts of impacts on wetlands, riparian vegetation, and ruderal vegetation on the inboard side of the levees are of special concern to the SFBRWQCB. Flow containment would result in continued sediment deposition that would necessitate ongoing sediment removal. The SFBRWQCB is also opposed to removal of woody vegetation for 100 feet upstream and downstream of bridges.

The proposed levee raising and floodwalls would not widen the existing channel and therefore would not result in an increase in sediment deposition. Most of the sediment is usually transported during the bankfull event, and 5-year and below flood frequency event, and the Proposed Project would not alter the current channel configuration for those storm events. In a lot of places, the levee raising and floodwalls are only for freeboard purposes to meet Federal Emergency Management Team (FEMA) requirements. Continual channel maintenance will be required for any kind of flood protection facilities; however, the channel maintenance plan for this project as outlined in the Final EIR and Engineer's Report is consistent with the maintenance plan in the District Stream Maintenance Program and will use the same best management practices (BMPs). The impacts on the habitats on the inboard side of the levees are a result of the construction of levee raising. The District would seek to further reduce the impacts on the habitat during the design phase by changing certain design elements wherever feasible.

The removal of woody vegetation upstream and downstream of the bridge structure is required because it poses a danger during high flow where they can fall and cloak the bridge opening. Maintenance of the flow transition areas is critical for the hydraulic performance of the openings under bridges where woody vegetation tends to collect. The District agrees that stream banks adjacent to bridge crossings are prone to erosion because of increased velocities downstream and backwater erosion upstream, necessitating structural treatment of some of the stream banks in the transition area.

Regarding the alternative to maximize flood protection while restoring floodplain areas, tidal marsh, and associated habitats, please refer to Response to Comment 1-1.

Please also refer to Master Response C.

Response to Comment 6-5

The RWQCB could not approve use of Pond A4 for wetland mitigation because it is still only in the planning phase, it would not be available until 2007, and it appears that the District is proposing out-of-kind mitigation for freshwater wetland impacts.

The District agrees that the 300-acre salt pond owned by the District is in the planning phase; however, the project is well underway with coordination with all regulatory agencies. The intent is to find ways to provide the mitigation needed for all District-wide impacts as soon as feasible.

The LGRP would include mitigation of its freshwater wetland impacts out of kind in Pond A4 and the mitigation scenario is detailed in Master Response F.

To mitigate for the time lag in completing mitigation activities at Pond A4, the mitigation approach identified in Mitigation Measure V-1 of the Final EIR (page 3E-24) has been revised to include the removal of 3 acres of exotic species vegetation in the LGRP area.

Response to Comment 6-6

Riparian mitigation in reach A may be appropriate, but further explanation of the low mitigation ratio is needed.

Please refer to Responses to Comments 5-9 and 5-11 and to Master Response F in chapter 3.

Response to Comment 6-7

Giant reed removal as mitigation of riparian impacts will be considered only after the SFBRWQCB is satisfied that in-kind and on-site mitigation is unavailable. This proposed mitigation is not appropriate.

The District has evaluated all potential areas for riparian and wetland mitigation in the LGRP area and has included all feasible areas in the mitigation plan. There are no additional areas that are feasible. The District has revised Mitigation Measure V-1 such that riparian impacts are mitigated at a 3:1 ratio.

Please also refer to Response to Comment 5-11.

Response to Comment 6-8

Concerns about the Channel Bank Modification Alternative and mitigation are similar to those about the Proposed Project. In addition, the excavation of the inboard toe of the existing levee and construction of channel walls in reaches D–F would appear to have significant impacts on the lower Guadalupe River.

The Channel Bank Modification Alternative would simply replace the existing levee with a steeper engineered wall (possibly a vertical concrete wall) in reaches D and E. This alternative would not require any additional work in the channel bottom or removal of additional vegetation other than vegetation on the levee surfaces. The low-flow channel would be permitted to move around in the bottom of the flood control channel. The Guadalupe River is already a highly engineered river with reservoirs and bypass systems installed and planned for upstream sites. This alternative would provide needed flood conveyance capacity while preserving much of the habitat values.

Response to Comment 6-9

Concerns about the Channel Bypass Alternative and mitigation are similar to those about the Proposed Project.

The District acknowledges the commenter's general concern regarding the Channel Bypass Alternative. This alternative is not the Proposed Project.

Response to Comment 6-10

The mitigation proposal for Pond A4 in the Baylands Mitigation Measure is insufficient. RWQCB supports the idea of using the existing salt ponds for flood storage; it encourages the District to consider adding a delta restoration component and offers to provide staff time to aid in the coordination of this effort. The District should coordinate with the Alameda County Flood Control Agency and its current efforts to study the potential for delta restoration and flood protection benefits for Alameda Creek, described in the Lower Alameda Creek Levee Reconfiguration Feasibility Study.

The District appreciates RWQCB's support for the use of salt ponds for flood storage. The delta restoration plan will be a greater effort and will need the participation of all agencies and property owners involved. The District will definitely be a key stakeholder in that project.

The District has contacted the Alameda County Flood Control Agency and unfortunately they are only in the conceptual phase of the levee reconfiguration project.

Please also refer to Master Response F in chapter 3.

Response to Comment 6-11

Further explanation is needed for the absence of mitigation for ruderal vegetation impacts.

The Final EIR indicates, on page 3E-32 under Mitigation Measure V-1, that although loss of ruderal vegetation is not considered a significant impact, the District's routine construction specifications and BMPs would restore this vegetation type by reseeding disturbed soil surfaces with grasses and forbs on the inboard sides of levees. The Final EIR also indicates, beginning on page 3E-23, that impacts on ruderal vegetation associated with the Proposed Project are considered less than significant because such vegetation is not considered a sensitive natural community and is a common cover type in the project area. The ruderal vegetation that occurs within the low-flow channel buffer area as indicated in the Final EIR and Engineer's Report, would not be affected by project construction or maintenance activities.

Comment Letter 7—California Department of Transportation, Jean C. R. Finney, District Branch Chief (October 10, 2001)

Response to Comment 7-1

Construction of a maintenance road under crossing at U.S. 101 may conflict with the U.S. 101 Auxiliary Lane Widening Project.

The District recognizes the potential for conflict with the Caltrans project and has considered the location of the project in preliminary LGRP engineering. The District has confirmed that both a maintenance road undercrossing and the auxiliary lane-widening project can be accommodated at this location. The District will continue to coordinate with Caltrans to ensure these project elements are compatible.

Response to Comment 7-2

The Draft EIR should indicate what the scour at Caltrans's bridges are before and after the project. Provide an analysis that shows bridges are stable under the final conditions.

Preliminary analysis has estimated the depth of scour at U.S. 101 to be a maximum of 2.5 meters (8.2 feet). This is consistent with findings presented in a January 2000 lower Guadalupe River sedimentation study, which identified reach A as subject to long-term scour and erosion because of a relatively steep channel bottom slope and high flow velocities. To mitigate the effects of this potential erosion, rock riprap would be installed at the channel bottom to protect bridge pier foundations. Reinforced concrete retaining walls and paving at the depressed maintenance roads adjacent to each bridge abutment would armor those foundations against scour.

Specific scour depths at SR 237 would be calculated as part of the bridge hydraulics report to be submitted to Caltrans for review as part of the bridge replacement portion of the LGRP. Scour depths are not expected to be significant, however, based on the previously mentioned sedimentation study. This study identified the SR 237 crossing area as an aggrading channel and not subject to long-term erosion.

Response to Comment 7-3

Raising the water surface elevation may increase pressure flow because of inadequate waterway area and could increase depth of scour. What effect will raised water surface elevations have on bridges?

Since release of the Draft EIR, scour analysis was performed at all bridges within the project area, using Proposed Project water surface elevations and flow velocities. As discussed in the draft EIR, scour and erosion measures will be implemented at each bridge location, based on this analysis. These measures are expected to include: concrete walls and paving, rock riprap and gabions, as shown in the LGR Engineer's Report. The Montague Expressway Bridge is the only bridge in the project area subject to pressure flow under the Proposed Project. This bridge has been analyzed for lateral and uplift hydraulic loads and found to be stable under pressure flow conditions.

Response to Comment 7-4

If there is debris in the channel, will there be impact loading on the bridge superstructure?

Historically there has been very little debris loading at bridges on the lower Guadalupe River. However, the effects of possible debris accumulation were accounted for in the design water surface profile. Debris impacts could result in some impact loading. However, it is not likely that this condition would differ from that currently experienced by the existing bridges during flood events.

Comment Letter 8—California Department of Transportation, Randell H. Iwasaki, Acting District Director (October 4, 2001)

Response to Comment 8-1

Because of the need to perform work or traffic control within the state ROW, an encroachment permit would be required.

The replacement of the existing eastbound bridge of SR 237 at the Guadalupe River is estimated to cost in excess of $1 million. Therefore, this project element would be coordinated with Caltrans project development staff. Because the work would not require substantial new ROW or increase traffic capacity, project development processing category 4B is applicable. A cooperative agreement would be executed between Caltrans and the District for construction of the bridge replacement, which would include a Caltrans encroachment permit for all work within state ROW.

Comment Letter 9—California Governor's Office of Planning and Research, State Clearinghouse, Terry Roberts, Senior Planner (October 9, 2001)

Response to Comment 9-1

This is to acknowledge that the State Clearinghouse has received your environmental documents for state review. The review period is from August 22, 2001, to October 5, 2001.

Comment noted. No response is necessary.

Comment Letter 10—County of Santa Clara, Roads and Airports Department, Felix Lopez, Project Engineer (September 27, 2001)

Response to Comment 10-1

We have no comments.

Comment noted. No response is necessary.

Comment Letter 11—County of Santa Clara, Roads and Airports Department, Felix Lopez, Project Engineer (October 12, 2001)

Response to Comment 11-1

An encroachment permit is required for work on the Montague Expressway bridge.

The District will work with Santa Clara County (the County) to obtain an appropriate encroachment permit.

Response to Comment 11-2

There may be facilities near or attached to the bridge that are owned by other agencies and companies. Please contact them for their requirements.

The LGRP does not propose modifications to the Montague Expressway bridge that would affect bridge facilities, but the District will contact all agencies or companies whose facilities may be affected by LGRP activities.

Response to Comment 11-3

The County's plan to widen Montague Expressway may require some access driveways to be closed.

The District will work with the County to ensure that the LGRP and Montague Expressway construction are coordinated.

Comment Letter 12—City of San Jose, Department of Planning, Building and Code Enforcement, Janis Moore, Planner II (October 12, 2001)

Response to Comment 12-1

How would flood protection for San Jose International Airport be affected by this project?

The present-day (baseline) hydraulic capacity of the lower Guadalupe River through reach A, opposite San Jose International Airport, is a minimum of 524 cms (18,500 cfs) with no freeboard, as reported in the LGRP Engineer's Report (CH2M Hill 2002). Appendix G of the Engineer's Report indicates that the Proposed Project design flow rate of 481 cms (17,000 cfs), plus local drainage, totals 519 cms (18,350 cfs). This cumulative flow rate would be accommodated by the Proposed Project, with 0.915 m (3 ft) of freeboard. The present-day and post-project water surface elevations in the channel would not be significantly different. This is true despite the fact that only maintenance upgrade-type improvements are proposed in reach A, and significant environmental mitigation plantings will be added to the channel by the Corps, Caltrans, and the District.

One of the primary hydraulic design criteria for the project, as noted in the Engineer's Report, is to maintain a design flow rate water surface elevation of 17.86 m (58.6 ft) immediately downstream of the I-880 Bridge. This is the elevation set by the Corps for the Downtown Guadalupe River Project.

The Proposed Project meets the Corps' design criteria while accommodating the added mitigation planting, without significantly raising water levels in the river, in 2 ways. First, proposed channel improvements downstream of U.S. 101, including construction of maintenance roads beneath the existing U.S. 101 bridge, which will expand the waterway opening at that location, lower the water surface elevation at the downstream end of reach A. Also, the project includes aggressive vegetation maintenance outside of mitigation planting areas to meet hydraulic design assumptions for the channel. This aggressive maintenance program represents a much greater level of vegetation management than currently exits for the present-day channel. Limited maintenance is proposed for the mitigation planting areas. The proposed maintenance program is described in the Engineer's Report.

Given that the present-day and post-project channel capacities and water surface elevations would not be significantly different, and that existing and planned future pumped flows from the Airport Pump Station would be accommodated, there are no anticipated adverse impacts to the airport's storm drainage system from the Proposed Project. The LGRP would actually improve flood protection for San Jose International Airport. Completion of the LGRP and the Downtown

Guadalupe River Project, together, would eliminate a major source of flooding to the airport and provide a significant flood protection benefit.

Response to Comment 12-2

Under CEQA, the EIR cannot avoid analyzing flooding impacts by assuming implementation of a Pump Station EOP that has not been completed and approved. The City would not agree to allow shutoff of its airport pump station at a time when it is needed the most.

The Proposed Project would have no effect on airport drainage pumps. The District has prepared an interior drainage analysis (Northwest Hydraulic Consultants 2002) that was conducted in coordination with the City of San Jose and City of Santa Clara. The analysis shows that the LGRP would accommodate an additional 38 cms (1,350 cfs) of pumped inflows and gravity drainage from the City's drainage system. Local drainage inflow would be accommodated within the design freeboard and would meet the Corps' freeboard standard. The results of this analysis indicate that restrictions of City pumping are not needed and an Emergency Pump Operations Plan for modeled scenarios is not needed. An EOP could be required for floods greater than the 100-year event. Please refer to Master Response B and the "Overview of Changes from Draft to Final EIR" section at the beginning of the Final EIR.

Response to Comment 12-3

The Draft EIR should identify the site in reach A designated as mitigation of other projects to show how they relate to and are accommodated by the new improvements proposed by the District.

The LGRP Engineer's Report that accompanies the Final EIR has accounted for mitigation plantings in reach A proposed by the Corps and Caltrans. The mitigation planting areas proposed by the District for the LGRP are located downstream of Airport Parkway and will not affect or be affected by implementation and maintenance of the Corps and Caltrans mitigation areas. Graphic depictions of these areas are shown in appendix F, "Engineering Drawings of Proposed Project," of the Engineer's Report (sheets 16–20).

With the exception of one Caltrans planting area, all of the Corps and Caltrans mitigation areas occur in the portion of reach A that is upstream of Airport Parkway. The Corps' mitigation area includes approximately 7,850 linear feet of SRA cover plantings that area planted in approximately 15-foot-wide bands adjacent to the low-flow channel. The Caltrans mitigtion planting areas are located on the middle to upper portions of the east bank.

LGRP improvements in this portion of reach A include minor levee raises on the west bank, installation of bridge scour protection under the Skyport Drive and

Airport Parkway bridges, installation of rock weirs, and construction of a maintenance ramp on the west bank upstream of Airport Parkway. The Corps and Caltrans mitigation areas in reach A were included in the hydraulic modeling for the LGRP; therefore, the LGRP design accommodates these mitigation planting areas.

The Corps and Caltrans mitigation areas will not be affected by the west bank levee raises or the installation of bridge protection areas. The District is coordinating with the Corps on the construction of a maintenance ramp on the west bank. This area is close to a planned bank stablization and SRA planting area that is scheduled for construction in late summer/fall 2003. The potential area of overlap between these two projects is approximately 200 linear feet.

Portions of the Corps and Caltrans mitigation planting areas will be temporarily affected during construction of the weirs. Some the Corps' and Caltrans' existing and future mitigation plantings would need to be removed in order to construct and provide access to the rock weir sites. The District will coordinate weir construction activities with these agencies and the District will be responsible for replanting and maintaining the affected planting areas.

Please also refer to Response to Comments 5-4 and 5-6.

Response to Comment 12-4

Figure 2-2 of the Draft EIR appears to conflict with the text description by showing a raised levee on the east bank of the river in reach A immediately south of U.S. 101, rather than a floodwall as on the opposite bank.

The text on page 2-15 has been revised to note that there would be a floodwall on the west bank only.

Response to Comment 12-5

The Draft EIR does not address the expansion of the District's existing easement from the City along reach A. An expanded easement area may not be feasible because of conflicts with the airport's landscaping mitigation, and existing Pacific Gas and Electric Company (PG&E) easements and potential realignment of airport roadways.

Because the engineering design was evolving and the Engineer's Report was being prepared concurrently with the Draft EIR, the text of the Draft EIR did not include the proposed easement along the west bank of reach A. As new survey data have become available during the design process, it has been found that the District's ROW boundary does not extend as far to the west as had previously been mapped. The proposed easement is for the slope from the levee crest to the surrounding land surface. Only fill material would be placed on this easement.

The fill would not interfere with existing PG&E easements and would generally be consistent with the existing landscaping and irrigation system, although it may be necessary to replace or adjust sprinkler heads or valves to match the new grade. The proposed easement could be made somewhat narrower by steepening the slope or by reducing the width of the maintenance road. However, both of these actions could interfere with the City's effort to establish a trail system on the maintenance road as shown in the 2020 General Plan. A narrow road may not permit safe pedestrian passage past district maintenance vehicles. Acquisition of this easement is identified as part of the project in the Final EIR, and it is not anticipated that obtaining the easement would have any environmental effect. The District will coordinate closely with the City as the LGRP design phase progresses.

Response to Comment 12-6

The City proposes mitigation of several projects to create additional riparian habitat along the west side of the river adjacent to the planned airport fuel storage facility. The City requests a meeting with the District to discuss this issue before the Final EIR is issued.

The District has met with the City to discuss riparian enhancement opportunities downstream of U.S. 101 on the west side of LGRP reach B. The District has revised Mitigation Measure V-1 to include riparian plantings in a levee setback area. Please refer to Master Response F in chapter 3.

Response to Comment 12-7

The Engineer's Report indicates that the District plans to create SRA cover along both sides of the river just downstream of the Skyport Drive bridge. The planned location of these plantings would conflict with the proposed Automated People Mover (APM) project. This issue should be addressed in the Final EIR.

The District's proposed LGRP mitigation plantings in reach A would be located between Airport Parkway and Airport Island Bridge downstream of the proposed APM site. The SRA cover habitat identified downstream of Skyport Drive is a Corps mitigation project for impacts associated with the Corps Downtown Guadalupe River Flood Control Project located between I-880 and I-280. The Final EIR does mention the potential for cumulative impacts on riparian resources, including the impacts from the proposed APM (page 4-24). Because of the height of the proposed APM, the proposed mitigation plantings would not be in conflict with the APM. Addition of this information would not change the conclusion that cumulative impacts on Guadalupe River riparian vegetation would be fully mitigated.

Response to Comment 12-8

The Draft EIR should mention that the project area for this flood control project is part of the City's General Plan 2020 Scenic Route and Trails Diagram and is planned for future Class 1 trail development.

The Final EIR text has been amended on page 3H-10 to mention this.

Response to Comment 12-9

The proposed trail should accommodate both recreational and commuter uses and must allow for shared use of maintenance equipment and trail use.

The District will meet with the City to discuss a future multiuse trail that is compatible with maintenance vehicle access needs.

Response to Comment 12-10

Maintenance road design at bridge undercrossings should provide sufficient vertical clearance (minimum 10–12 feet height) to accommodate trail use. Trail connections from major roadways should also be considered.

The District has met with the City and is designing the LGRP to accommodate the City's proposed trails.

Response to Comment 12-11

Measures should be taken to discourage vandalism to and graffiti along floodwalls adjacent to planned trail areas. Safety issues and aesthetics should also be addressed where floodwalls would be constructed on levees adjacent to future trail alignments.

Proposed LGRP floodwalls would be constructed to meet all safety requirements and in an aesthetically pleasing design/manner. The District implements a routine maintenance program for graffiti removal and trash pickup for aesthetic purposes along facilities operated and maintained by the District, such as the lower Guadalupe River. The District has met with City staff members to discuss methods to reduce floodwall vandalism and graffiti.

Response to Comment 12-12

The Draft EIR states that the LGRP would not result in direct impacts on planned recreational facilities because none are planned in the project area. This statement is incorrect and should be corrected.

The Final EIR text has been modified on page 4-6 to indicate that the LGRP will accommodate future trail development on the east bank of the lower Guadalupe River.

Response to Comment 12-13

Along with the Bay Trail, the future development of the lower Guadalupe River trail should be added to the list of cumulative projects.

The reference on page 4-6 to a future class 1 trail on the lower Guadalupe River in the City's General Plan has been revised in the Final EIR.

Response to Comment 12-14

The EIR should address the proposed alignments for the Guadalupe River Trail and should emphasize the importance of accommodating a trails system north of I-880. It is the City's desire to have a paved trail constructed as part of the project.

The Final EIR indicates on page 1-6 that one of the project objectives is to "provide, where possible, a continuous maintenance access along the river that could be used as a future pedestrian trail extension." The Proposed Project description on page 2-15 indicates that "accommodation of future recreation trail extensions on the LGRP levees" is a feature of the LGRP. While the District is committed to designing the Proposed Project to accommodate and facilitate future trail development, constructing this trail as part of the LGRP is not proposed at this time.

The District will continue to discuss with the City accommodation of future trail facilities on LGRP levees. A separate environmental review may be needed to implement trail facilities on LGRP levees.

Response to Comment 12-15

While the EIR generally references the Bay Trail, there should be specific references to the Pre-Final Bay Trail Master Plan (June 2001) and a discussion in the appropriate places of any potential impacts of the project on the trail.

The Final EIR has been amended on page 3I-5 to reference the City's Bay Trail Master Plan. The Final EIR did consider potential impacts of the Baylands Mitigation Measure on existing and planned recreational facilities in the vicinity of the Alviso Marina County Park, including portions of the Bay Trail in the area. The District has already begun coordination with the County to ensure that the project, mitigation measures, and park expansion plans are well coordinated. In general, the Proposed Project is not expected to affect or exclude future Bay Trail facilities because of the relatively minor levee and floodwall modifications proposed in this area.

Response to Comment 12-16

It is not clear whether proposed depressed maintenance roads in reach G or the existing maintenance road on top of the levee would be available for use by the Bay Trail.

The Proposed Project is designed to accommodate future trail development on existing levee maintenance roads. Development of recreation trails on the depressed maintenance roads would still need to be coordinated with regulatory agencies.

Response to Comment 12-17

The potential impacts of increased downstream flooding on the proposed Bay Trail should be discussed. Reach 9 of the Bay Trail is located directly adjacent to Pond A8D.

The increase in downstream flooding would not affect the Bay Trail because floodflows would be directed mainly to Pond A8W and floodwaters would be evacuated from salt ponds following periods of flooding.

Response to Comment 12-18

The EIR should discuss the San Jose 2020 General Plan Scenic Routes and Trails Diagram.

Please refer to Response to Comment 12-8.

Response to Comment 12-19

There should be a section under the San Francisco Bay Trail Plan that describes the City's Bay Trail Master Plan.

The Final EIR has been modified on page 3H-13 to make note of this plan.

Response to Comment 12-20

The plans and policy consistency analysis should discuss the consistency of the Proposed Project with the City's Bay Trail Master Plan. The EIR should clarify where trails would be accommodated and whether the 1.22-meter floodwall would affect the trail.

Please refer to Responses to Comments 12-15 and 12-16. The Final EIR has been modified on page 3H-15 to indicate that the Proposed Project is compatible with the Bay Trail Master Plan. The District has met with City staff to discuss the project aesthetics and design of the floodwalls.

Response to Comment 12-21

The EIR should address impacts of the Channel Bank Modification Alternative's 1-meter channel wall on trail users.

Should the District consider implementing the Channel Bank Modification Alternative, appropriate safety features for trail users such as guardrails would be built into this alternative. No further EIR analysis is needed.

Response to Comment 12-22

The EIR should address impacts of the Baylands Mitigation Measure on the Bay Trail.

The Baylands Mitigation Measure would not significantly affect or exclude future Bay Trail facilities because of the relatively minor levee modifications proposed in the Alviso Marina County Park area. The District is also coordinating with County staff regarding implementation of the Alviso Marina Park Plan.

Response to Comment 12-23

The EIR should discuss how the Baylands Mitigation Measure could create changes in the Alviso Marina County Park and how these changes could affect the Bay Trail in reach 7.

The Baylands Mitigation Measure includes improvements of the east bank levee from UPRR downstream to the Alviso Marina County Park. The levee raise would not affect the Bay Trail. The revised levee crest would provide the opportunity for a trail system.

Response to Comment 12-24

Impacts of the Baylands Mitigation Measure on Reach 9 of the Bay Trail should be discussed. The EIR should clarify whether this mitigation measure will reduce the potential flooding impacts to Reach 9.

The increase in downstream flooding would not affect Reach 9 of the Bay Trail because floodflows would be directed mainly to Pond A8W and floodwaters would be evacuated from salt ponds following periods of flooding.

Response to Comment 12-25

Page 3I-5, under the Reach G discussion should specifically reference the Bay Trail Master Plan.

The referenced discussion has been amended to identify Bay Trail facilities that are located adjacent to reach G.

Response to Comment 12-26

The EIR should include a statement about Bay Trail impacts on page 3I-9 .

Please refer to Response to Comment 12-8. The text on page 3I-8 has been modified in the Final EIR. No project impacts on the Bay Trail would occur.

Response to Comment 12-27

There should be a discussion regarding the timing of construction of the proposed project and the construction of the Bay Trail on page 3I-9 of the EIR.

The Proposed Project would have no direct impact on the timing of the construction of the Bay Trail. The District is currently coordinating with the City on timing of LGRP construction. Possible future use of LGRP levees for trail development has been accommodated to the extent possible. The LGRP does not include trail development and a separate environmental review process may_be needed to allow use of LGRP levees for future trail development. No changes to the EIR have been made.

Issues such as timing of construction and paving could be addressed at that time. No changes to the EIR have been made.

Response to Comment 12-28

Visual impacts of the proposed project on trail users should be discussed on page 3I-9.

Because no formal trail use is currently allowed on LGRP levees and the Proposed Project does not include recreation trails, no impacts on trail users have been addressed in the EIR. The City may be required to conduct a separate environmental review process for a specific trail feature on LGRP levees. Should LGRP levee trail use be formally proposed as a future project, it is anticipated that the LGRP levee raising and floodwalls would be compatible with trail use because proposed levee raises are relatively minor and proposed floodwalls constructed on the inboard hinge of the levee top would not block views from the top of the levee to the river.

Response to Comment 12-29

The EIR should address the impacts resulting from the construction of backwalls on access to the Bay Trail.

Discussion of impacts to Bay Trail access from backwall levee construction is not appropriate because formal access to LGRP levees are not provided under the Proposed Project. However, the project design does not preclude recreational access. The outboard levee face has a slope of 2H:1V and is not appropriate for formal trail access. To provide formal trail access points, it will be necessary to provide stairs and ramps (for ADA compliance). The backwalls would not prevent installation of these types of facilities. The City may be required to conduct a separate trail project environmental review that could address these access issues. No change to the EIR has been made.

Response to Comment 12-30

The visual impacts of the Channel Bank Modification Alternative to trail users should be discussed on page 3I-11.

Please refer to response to comment 12-28. Neither the Proposed Project nor the Channel Bank Modification Alternative identify trail construction or use on LGRP levees.

Response to Comment 12-31

The City of San Jose's portion of the Bay Trail should be included in the list of cumulative projects analyzed in the EIR.

The EIR has been modified to include potential use of LGRP for a portion of the Bay Trail and the cumulative impacts of this potential future project is addressed in Final EIR Chapter 4.

Response to Comment 12-32

The Draft EIR does not identify the actual needed capacity of the river channel to provide the 100-year flood protection. The 17,000-cfs design capacity assumes no impact on the peak flow from the watershed downstream of the confluence of Los Gatos Creek and the Guadalupe River. This assumption is unrealistic; thus, in our opinion, the channel is not designed for 100-year flood protection.

The Cities of Santa Clara and San Jose have advised the District of their interest in comprehensive flood protection, including the need to address 100-year protection from interior drainage flooding. The District has prepared an interior drainage analysis (Northwest Hydraulic Consultants 2002) that was conducted in coordination with the City of San Jose and City of Santa Clara. Based on the assumptions of the Proposed Project, the analysis shows that the LGRP could accommodate an additional 38 cms (1,350 cfs) of pumped inflows and gravity drainage from the Cities' storm drain systems during the peak riverine flow in the river. Local drainage inflow would be accommodated within the design freeboard and could be accommodated within the design freeboard and would meet the Corps freeboard standard. An EOP is therefore not necessary for the design flood event. However, an action plan is still needed for flood events greater than the design floodflow. The District's EOC is coordinating with the Cities' offices of emergency services to develop a countywide EOP to address conditions when the design freeboard is exhausted and coordinated pumping operations will need to be appropriately monitored and managed via an EOP and by the cities.

Please refer to Master Response B in chapter 3.

Response to Comment 12-33

The Draft EIR does not address the impact of residual flooding on the local drainage basin. It is not acceptable to cause property damage from residual flooding. A study and routing analysis of residual flooding must be performed to determine the impact during peak flow.

Under existing conditions, the lower Guadalupe River cannot accommodate all pumped inflows during a design event and floodflows would overtop lower Guadalupe River levees and flood San Jose and Alviso. Under the LGRP, floodflows conveyed from upstream and the additional 38 cms (1,350 cfs) from the cities' pumping operations would be accommodated; hence, the LGRP would improve local drainage conditions.

Response to Comment 12-34

Shutting pump stations in the lower Guadalupe River reach would result in massive flooding in streets and private properties. This is not acceptable to the City. We believe that the 100-year design capacity should take into account the effect of the flows from pump stations (current and future planned), including all outfalls that discharge to the lower Guadalupe River.

Please refer to Responses to Comments 12-32 and 12-33.

Response to Comment 12-35

Shutting off pump stations at the beginning of levee freeboard infringement, which is approximately 3.5 feet from the top of the levee, is not acceptable because it is not reasonable to flood local streets when there is no imminent threat of levee overtopping or breach. The City's Office of Emergency Services is willing to work with the District on an action plan to limit operation of pump stations during imminent threats of levee overtopping or breach. However, this should be done in the event of flood events greater than the realistic 100-year design capacity.

Please refer to the "Overview of Changes From Draft to Final EIR" at the beginning of the Final EIR and also to Response to Comment 12-32 and 12-33. The District agrees that an action plan is needed for flood events greater than the design floodflow. The District's EOC is coordinating with the City's Office of Emergency Services to develop a county-wide EOP to address conditions when the design freeboard is exhausted and coordinated pumping operations will need to be appropriately monitored and managed via an EOP and by the cities.

Response to Comment 12-36

The effect of the proposed raised levees on all drainage outfalls should be addressed in the Draft EIR. The City is concerned that raising the levees may result in a need to construct additional pump stations.

The District has analyzed the potential effects of the Proposed Project and alternatives on existing lower Guadalupe River outfalls. The Proposed Project would not directly affect any of the existing or proposed drainage outfalls because of the relatively minor changes proposed to existing levees to meet the design freeboard requirements. Under existing conditions, all gravity drainage will have ceased to discharge to the river because the stage in the river would have closed off the flow. LGRP water surface elevations would be similar to water surface elevations under existing conditions. The LGRP would also not alter the function of the outfalls. Therefore, the Proposed Project would not change the current drainage outfall system or result in the need for additional pump stations.

Response to Comment 12-37

The reliance on the proposed design to store floodwater in the salt ponds during the peak flows is not acceptable. The salt pond levees are not engineered levees and thus may fail in the event of excess storage. If salt pond levees fail, the impact on Alviso may be significant. The design should provide engineered channel protection all the way to San Francisco Bay.

The use of channel protection on Alviso Slough to San Francisco Bay was analyzed during the preliminary screening analysis in the Draft EIR and Engineers Report, but determined to have the potential for substantial significant adverse impacts on fish and wildlife resources. It was further determined to be financially impractical because of the need to reconstruct the entire levee system and conduct nearly continuous dredging of Alviso Slough to maintain channel capacity. Please refer to Master Responses C and D, and Response to Comment 20-8 for a discussion of alternatives.

- The District acknowledges that the salt pond levees are not engineered levees and therefore has ensured via the following project elements that the LGRP would not worsen existing conditions: Under existing conditions, during high flow events, floodwater will begin spilling into the salt ponds through the low point at the non-engineered levee downstream of UPRR. This low point would eventually erode, resulting in a catastrophic failure of the levee, and river water would flow unimpeded into the salt ponds. Evacuating floodwater from the salt ponds would then be very difficult. The proposed construction of an engineered weir at this low point in the LGRP would greatly reduce the risk of failure and provide better control of floodwater.
- Under existing conditions, during high flow events, floodwater that has entered the salt ponds would remain in the salt ponds for a long time. Though the LGRP would increase the water depth in the ponds up to 2 feet compared to existing conditions, the LGRP would provide pumping of Ponds A8 and A6 to reduce water depth below pre-storm levels within a few weeks, as compared to a few months or years under existing conditions.
- The proposed engineered weir along the west Alviso Slough levee has been carefully designed such that floodflows into Alviso Slough would not change as compared to existing conditions. Therefore, the existing levee system would not be subject to additional stress.

Please refer to Response to Comment 16-4.

Comment Letter 13—City Of Santa Clara, Engineering Department, Gustavo Gomez, Principal Engineer (October 11, 2001)

Response to Comment 13-1

It is crucial for the City to have the improvements to the LGRP designed to convey the 100-year flow to San Francisco Bay (not UPRR) and maintain the required FEMA freeboard on levees and at river crossings. The appropriate drainage basin area for the Guadalupe River must be taken into account in the engineering analysis to calculate the 100-year flow in the river.

Please refer to Response to Comment 12-33 and Master Response B in chapter 3.

Response to Comment 13-2

An agreement such as the LCA with the Corps does not justify the proposed 17,000-cfs capacity in the lower Guadalupe River. The District cannot simply add the capacities of the 18 pump stations to the 17,000-cfs flow to obtain the river's 100-year flow. A more involved engineering analysis must be performed to determine the 100-year flow.

The design of LGRP improvements uses the Corps calculation of the design flood for the Downtown Guadalupe River Project to ensure that the LGRP meets the District's LCA with the Corps. The 100-year design flood hydrograph for the Guadalupe River basin was based on hydrologic studies conducted by the Corps in the late 1970s (U.S. Army Corps of Engineers 1977) and application of the U.S. Army Corps of Engineers HEC flood hydrograph model, HEC-1 (U.S. Army Corps of Engineers 1991). The Corps design flood hydrograph was calculated to have an instantaneous peak flow of 481 cms (17,000 cfs) at the St. Johns Gaging Station. Hydraulic modeling for the LGRP applied the Corps instantaneous peak flow to the lower Guadalupe River at I-880 to calculate water surface elevations on the lower Guadalupe River under existing and Proposed Project flooding conditions. The Final General Re-Evaluation & Environmental Report for the Proposed Modifications, Guadalupe River Project, Downtown San Jose, California refers to a 100-year design floodflow of 481 cms (17,000 cfs) on pages 4-10 and 6-9.

The District has also prepared an interior drainage analysis (Northwest Hydraulic Consultants 2002) that was conducted in coordination with the Cities of San Jose and Santa Clara. The analysis shows that the Proposed Project (assuming 481 cms [17,000 cfs] floodflow) could accommodate an additional 38 cms (1,350 cfs) of pumped inflows and gravity drainage from the cities' storm drain systems during the peak riverine flow in the river. Local drainage inflow could be accommodated within the design freeboard and could meet the Corps freeboard standard. An EOP is therefore not necessary for the design flood event, although it may be needed for larger events. Local drainage conditions would improve under Proposed Project modeled scenarios.

Response to Comment 13-3

Staging area 10 shown in figure 2-6 cannot be used because the area is being used as a mitigation site for replacement wetlands.

Comment noted. Staging area 10 has been removed as a potential staging area during construction.

Response to Comment 13-4

At the top of page 3A-9 of the Draft EIR, the 11,000-cfs flow is noted as having a recurrence interval of 25 years, based on figure 3-3. However, figure 3-3 shows a flow of 11,000 cfs as having a recurrence interval of approximately 35 years. Also, figure 3-3 shows the 100-year flow to be approximately 17,600 cfs, not 17,000 cfs.

The text has been revised on page 3A-9 to properly reflect the 35-year recurrence interval of the January 1995 flood with respect to figure 3-3.

The 481 cms (17,000 cfs) flow rate in the Final EIR represents the LCA design flow. The District concurs that according to figure 3-3, the 100-year flow is about 498 cms (17,600 cfs). However, this figure shows statistical extrapolation of measured flow data. The LCA design flow is based on simulated runoff and flood routing from the watershed in response to a design storm.

Response to Comment 13-5

In figures 3-8, 3-9, and 3-12, the street name for Trimble Road should be corrected.

Comment noted. The street name has been corrected on these figures.

Response to Comment 13-6

The Pump Station EOP must be treated as a totally separate issue and must not be used as a mitigation measure for the LGRP. The LGRP must be designed to convey the 100-year flow, taking into account all pump stations, outfalls, tidal effects, and freeboard requirements. The EOP should not be part of the EIR *certification process for the LGRP. The EOP should not be included in chapter 4, "Cumulative Impacts."*

Please refer to Responses to Comments 12-33 and 12-35.

Response to Comment 13-7

Add the following projects to the Draft EIR: Los Capitancillos Freshwater Wetland Mitigation Site, the District's Instream Recharge Program, and the City's Riparian Corridor Policy Study.

Comment noted. The Final EIR has been modified on pages 4-2 and 4-3 to include the Wetland Mitigation Project at Fairway Glen site, the Nelo-Victor Pump Station Update Project, the Los Capitancillos Freshwater Wetland Mitigation Site, the City's Riparian Corridor Policy, and the District's Instream Recharge Project. These projects were added to the list of projects evaluated in the cumulative impacts analyses). These projects were evaluated previously for the Guadalupe River Project and were included in appendix F (pages 6-17 to 6-19). Since publication of the Guadalupe River Project EIR/Environmental Impact Statement (EIS), these projects have evolved somewhat. However, these projects are not expected to have direct or indirect adverse effects on the resources of the Guadalupe River. In fact, they all should lead to the betterment of the resources along the Guadalupe River corridor. The evolution of these projects would not change the cumulative impact conclusions presented in the Final EIR.

Response to Comment 13-8

Under the description of the Rivermark Project (page 4-5), it is stated that Sun Microsystems purchased the land from the State of California. This is not my understanding.

The appropriate update to this information has been made on page 4-6 of the Final EIR.

Response to Comment 13-9

There are 18 pump stations, not 17 as stated in the second paragraph on page 4-12.

Comment noted. The change has been made on pages 4-5 and 4-20 of the Final EIR.

Response to Comment 13-10

The District must certify that the lower Guadalupe River would have the capacity to safely convey the 100-year design floodflow when the LGRP is completed.

The Corps will certify the LGRP as meeting the LCA requirements and providing 100-year flood protection, including local drainage, with appropriate Corps and FEMA freeboard.

Please refer to Master Response B in chapter 3 and Response to Comments 12-33 and 12-35.

Response to Comment 13-11

The definition of the 100-year flow in the glossary of the Engineer's Report should be amended to make it clear that the 17,000-cfs flow occurs at the confluence of the Guadalupe River and Los Gatos Creek, which does not take into account contributing sources from pump stations and outfalls downstream of said confluence.

The definition of the "100-year flood" in the glossary of the Engineer's Report has been amended to note that the design floodflow occurs at the U.S. Geological Survey (USGS) gage immediately downstream (St. John's Street) of the confluence of Los Gatos Creek with the Guadalupe River, which does not include the downstream output of pump stations and outfall. However, the District has determined that the latter can be accommodated by the Proposed Project. Appendix G has been added to the Engineer's Report to further define the 1% flood. Please also see Master Response B in chapter 3 for a discussion of the 100-year flood. The Final EIR states that the design floodflow, 481 cms (17,000 cfs), occurs at the St. John's Street gage and represents the peak flow that is likely to enter the LGRP area from upstream (page 3A-10). This definition is consistent with the floodflow assumed by the Corps for the Downtown Guadalupe River Project. No changes have been made to the Final EIR.

Response to Comment 13-12

The Engineer's Report states that the total drainage area for the Guadalupe River is 170 square miles, but the Draft EIR says 160 square miles. Which is correct?

The Final EIR is correct. The conversion between hectares and square miles was miscalculated in the Engineer's Report (41,400 hectares = 159.8 square miles).

Response to Comment 13-13

Table 1-1 of the Engineer's Report should be edited.

Table 1-1 of the Engineer's Report will be edited as follows:

- Reach A: "Levee raising" will be added.
- Reaches B and C: The word "floodwalls" will be removed.
- Reach G: Levee raising will be used at low spots in the existing levee to raise the subgrade (i.e., foundation) elevation of floodwalls and minimize their height.

Comment Letter 14—City Of Santa Clara, Engineering Department, Gustavo Gomez, Principal Engineer (July 28, 2000)

Response to Comment 14-1

One of the City's main concerns is increased susceptibility to flooding as a result of the Guadalupe River improvements. The 100-year flood protection provided by the Guadalupe River must extend to San Francisco Bay.

Please refer to Responses to Comments 13-1 and 13-2 and to Master Responses A and B in chapter 3.

Comment Letter 15—Guadalupe-Coyote Resource Conservation District, Nancy Bernardi, Board of Directors (October 15, 2001)

Response to Comment 15-1

We believe the Proposed Project is a continuation of past failed flood control practices. There should be no consideration of using old methods that failed on the Guadalupe River. Alternative 2 would result in continued sedimentation problems, flooding from lower sections of Coyote Creek and Guadalupe Slough, and extreme tide/storm events.

The District disagrees that the LGRP is a continuation of past failed flood control practices. The LGRP's relatively minor channel modifications and modest levee and floodwall improvements would provide an additional safety factor along the lower Guadalupe River; in many areas along the river, floodwalls and heightened levees are being proposed simply to increase freeboard. In potentially affected areas, such as downstream of I-880, grade control weirs will be installed to both protect the channel bottom as well as enhance fish habitat. In addition, sediment and vegetation maintenance activities will ensure that the capacity of the channel is maintained.

The District acknowledges that there is some residual risk with any flood protection structure. The LGRP is being designed to minimize this risk, so that, for a design flood event, the floodwalls and levees are much less likely to fail. The LGRP will improve the integrity of the levee at the Alviso weir location, making it less likely to fail at that point than under current conditions.

The Proposed Project does meet the project objectives identified in the Final EIR on page 1-6. The accompanying LGRP Engineer's Report supports this conclusion. The District concurs that problems still exist in the area with flooding from Guadalupe Slough and as a result of extreme tide events. The LGRP would increase the flood protection level in the Guadalupe River. The LGRP hydraulics analysis takes into account flooding from Coyote Creek, Guadalupe Slough, and tides. The Engineer's Report presents the assumptions used for hydraulic modeling of the LGRP area and the Baylands area.

With respect to the comment that the Guadalupe River is producing too much sediment, the reservoirs and development in the upper watershed have actually prevented coarse sediment from being transported downstream. The reduction in sediment load in conjunction with a general subsidence of the downtown San Jose area has led to a steepening of the channel and increased channel erosion. Most of the fine sediment in the lower river, especially near Alviso, is derived from the bay. These deposits are estuarine in origin, not fluvial.

The proposed maintenance program presented in chapter 6 of the Engineer's Report recognizes the need for sediment management on the lower Guadalupe River and presents a reasonable program to address sedimentation issues.

The District's Mitigation and Monitoring Program also presents an adaptive management approach that will be used to ensure success of proposed mitigation measures and environmental commitments, and which incorporates a process for monitoring and potentially adjusting channel maintenance activities and low-flow channel conditions. This mitigation and monitoring program is consistent with that in the District's Final EIR for the Downtown Guadalupe River Flood Control Project. The District's coordination with resource agencies and other stakeholders has identified a desire to monitor the geomorphologic processes in the lower Guadalupe River low-flow channel to provide a mechanism to judge whether District channel maintenance, sedimentation, or bank erosion is affecting ecological functions and values in the lower Guadalupe River.

Response to Comment 15-2

We believe that more than a reconnaissance-level investigation of the Alviso Baylands downstream of the UPRR bridge is needed. Has a geomorphological analysis been conducted? Clearly there is not enough information in the Draft EIR on this subject. Has the large amount of new and impervious surfaces in Alviso been taken into account?

The investigation of the Alviso baylands area conducted for the EIR is adequate because it provided sufficient information to identify potential environmental impacts of implementing the Baylands Mitigation Measure. Assessing the potential environmental impacts of the LGRP and Baylands Mitigation Measure did not require a geomorphic analysis.

All new development (including impervious surfaces) in Alviso that is allowed under the City's General Plan has been factored into the LGRP hydraulic analyses. Any new development that deviates from the City's general plan would need to be analyzed by the project proponent.

Response to Comment 15-3

We doubt that the river will receive a peak flow of only 20,000 cfs. Please discuss the anticipated discharges for the 18 projects that are already built, under construction, or proposed.

Please refer to Response to Comment 12-33 and 12-35.

Response to Comment 15-4

Keep a semblance of natural design that would work, such as widening modified floodplains and moving levees back or using storm drains or bypasses that carry off excess water directly to the bay instead of conveying it directly into the river. These solutions become extremely important in light of the Baylands Goals Project, which calls for tidal restoration.

The District did evaluate the potential for setback levees on the lower Guadalupe River, but screened this potential alternative out because the levee setback distance that would be needed is impractical from a technical, economic, and schedule perspective. Please refer to Response to Comment 2-1 and to Master Response C in chapter 3. A channel bypass alternative was evaluated in the Final EIR. This alternative is less feasible than the Proposed Project from a schedule perspective, costs are prohibitive, and impacts on biological resources would be greater than under the Proposed Project. The potential to modify (dredge) Alviso Slough to pass floodflows was also examined. This type of activity is impractical because extensive dredging would need to occur annually and Alviso Slough impacts would be severe.

The District supports future tidal restoration of the South Bay salt ponds, but this potential activity is not an LGRP element because tidal restoration in this area is beyond the scope of this flood protection project, and restoration would not occur for approximately 10-20 years. The District has met with USFWS representatives to discuss possible future restoration plans and to begin a dialogue about ensuring that flood protection and restoration needs are compatible. The flood protection elements recommended for the LGRP are considered to be compatible with possible future salt pond restoration. The District will be a key stakeholder in this effort. At this point, the Baylands Goals Project is a vision and is too speculative to factor into the LGRP analysis.

Please refer to the Engineers Report for addition details pertaining to the LGRP screening process.

Response to Comment 15-5

We are disappointed and disagree that an EIS is unnecessary. We strongly believe that a proper investigation must include an EIS.

The Corps of Engineers is the lead agency for the NEPA process. In April 2001, the San Francisco Regulatory Branch of the Corps concluded that potential impacts of the LGRP within Corps jurisdictional areas would not significantly affect the quality of the human environment. Therefore, the Corps concluded that activity requiring Corps authorization did not constitute a major federal action and that preparation of an Environmental Impact Statement (EIS) was not required.

Please refer to appendix A of the Final EIR.

Response to Comment 15-6

The document is unclear on the Proposed Project. Would Alternative 2 be built if the ponds are unavailable for floodwater storage? What is the anticipated scope of the project if the ponds are unavailable?

If the ponds are unavailable for floodwater storage, the District may select a different alternative than the Proposed Project. The District supports the restoration of the Baylands area as envisioned in the Baylands Ecosystem Habitat Goals report. If plans for future restoration are carried forward, an analysis would be conducted to ensure that the restoration activities are designed such that flood control is not adversely affected. Please also refer to Response to Comment 15-4.

Response to Comment 15-7

Has there been analysis of all the major (Guadalupe River) tributaries regarding past and anticipated future cumulative impacts?

Chapter 4 of the Final EIR addresses the cumulative impacts that could occur on the Guadalupe River, and summarizes the considerable cumulative mitigation measures that are proposed or have been implemented for Guadalupe River resource impacts. Additional information has also been provided in the Final EIR. The cumulative impacts discussion focuses on impacts to Guadalupe River resources. Please refer to Response to Comment 2-2 for an explanation of this approach.

Response to Comment 15-8

Under CEQA, all cumulative impacts must be addressed. Since velocities, channel erosion and deposition, and SRA cover impacts from the LGRP cannot be determined until the final design is chosen, all of the cumulative impacts are not addressed in the EIR. We believe the Draft EIR has insufficient information and does not comply with CEQA.

Please refer to Response to Comment 2-2 regarding the LGRP Final EIR cumulative impact assessment.

The District has made a reasonable estimate of the probable Guadalupe River cumulative impacts, including those impacts from velocities, channel erosion, and deposition (there are no impacts to SRA cover) in chapter 4 of the Final EIR. The LGRP cumulative analysis is based on the recently approved Downtown

Guadalupe River EIR/EIS cumulative impact analysis. LGRP project impacts plus any new projects that have been proposed since the previous analysis are considered to ensure that the District is considering all of the relevant past, present, and probable future projects that could affect Guadalupe River resources. Please refer also to response to comment 1-1 for a discussion of the cumulative impacts approach.

Comment Letter 16—Stoel Rives, Anne E. Mudge (October 3, 2001)

Response to Comment 16-1

Cargill strongly objects to the District's proposed flooding of salt ponds, and such activities constitute inverse condemnation of its property without compensation.

The District disagrees that implementing the Proposed Project would result in inverse condemnation of Cargill's property without compensation. The District acknowledges on page 3A-15 of the Final EIR that the Proposed Project would affect Cargill's salt pond operation and has proposed a mitigation measure that would provide an improvement to the existing flooding conditions in the Cargill salt ponds. The District met with Cargill representatives on July 20, 2001, before the Draft EIR was released, to present the Proposed Project and Baylands Mitigation Measure and has proposed a reasonable solution to existing flooding conditions in Cargill ponds.

Response to Comment 16-2

The EIR neither discusses engineering solutions that the District could adopt to avoid flooding nor analyzes the significant damage to Cargill's operations and property interests that would result from the Proposed Project.

Numerous solutions were evaluated downstream of the UPRR bridge, including tailwater suppression, construction of larger levees on Alviso Slough, dredging, construction of new setback levees adjacent to Alviso Slough in portions of the salt ponds, and construction of a new dredged channel from the Alviso Marina to San Francisco Bay that would cross the salt ponds. The Proposed Project and recommended mitigation measures seem most feasible.

Please refer to Master Responses B, C, and D for a discussion of the alternatives analysis.

Response to Comment 16-3

Flooding of Cargill's ponds would effectively eliminate more than 4,000 acres of salt production from Mountain View to Alviso for an undetermined length of time. The proposal to mitigate this impact by pumping excess stormwater would exacerbate Cargill's losses by removing brines from the system.

The Baylands Mitigation Measure is a reasonable and feasible measure to reduce the potential for significant flooding impacts in Cargill Salt Ponds A8W and A8D. As indicated in the Final EIR beginning on page 3A-13, "current conveyance capacity conditions result in flooding in Alviso and Cargill Salt Ponds when lower Guadalupe River flows exceed the capacity of Alviso Slough." The current analysis shows that under modeled peak discharge of 400 cms (14,000 cfs), the Cargill ponds would flood to depths of 1.8–2.6 meters (6.0–8.5 feet) (see table 3-4) *without* the Proposed Project. This analysis shows that impacts on Cargill's production capacity and salt pond operations occur infrequently when peak flood discharges exceed the Alviso Slough channel capacity under existing conditions.

The Final EIR also indicates that the Proposed Project would increase the depth and duration of flooding in the Cargill ponds (beyond what already occurs under existing conditions) by up to an additional 0.39 meter (1.27 feet) in Pond A8W (see table 3-4). Because the overflow weir would be set at the existing levee height, the frequency of overtopping would not increase under the LGRP. The increase in volume and depth of flooding is considered a significant impact on the salt ponds, but would be reduced to a less-than-significant level by returning flooding depths to better than pre-project levels.

Response to Comment 16-4

The ponds have not been designed to accommodate the kind of increase in volume contemplated under the District's proposal. The increased pond depths would subject salt pond levees to increased erosion and increased risk of significant damage or perhaps even failure.

The Final EIR recognizes the current effect on the Cargill ponds of flooding under existing conditions. Potential damage to pond levees, if any, would likely result under existing conditions because most of the flooding (up to 2.6 meters [8.5 feet] in Pond A8W) would occur under existing conditions. However, the Final EIR recognizes that, even given this probability, the additional depth and duration of flooding in the Cargill ponds caused by the Proposed Project would result in a significant impact. To reduce this increment of depth and duration impact (and the potential effect on Cargill levees), the Final EIR recommends implementing Mitigation Measure HH-3, "Pump Cargill Salt Ponds." Under this measure, the District proposes to pump floodflows from ponds to a lower level and more quickly than would be expected in these ponds under existing conditions, thereby reducing the impact of the Proposed Project to a less-than-significant level.

Please refer to Response to Comment 17-8.

The District acknowledges that Cargill's salt pond levees are not engineered levees. Please refer to Response to Comment 12-37 and page 18 of chapter 4, "Cumulative Impacts," for a discussion of impacts to existing levees.

Response to Comment 16-5

The District's past and projected flooding of private property is not reasonable. Designing public flood control works so that they purposefully and directly damage private property is unreasonable on its face and constitutes an unconstitutional taking under controlling law.

Please refer to Responses to Comments 16-1 through 16-4.

Comment Letter 17—Stoel Rives, Anne E. Mudge (October 12, 2001)

Response to Comment 17-1

The Draft EIR is inadequate under CEQA for the following reasons. There is a fundamental failing in the design and definition of the project that has undermined a comprehensive assessment of the project's environmental impact. The project area should have been extended to the bay. By limiting the project area to the UPRR crossing and assessing impacts of a mitigation measure, the EIR avoids a serious analysis of environmental impacts and alternatives as required by CEQA.

The LGRP planning process has included a comprehensive engineering investigation of the lower Guadalupe River's flood control problems and potential solutions to current flood threats. The limits of the LGRP area were selected to meet specific project objectives as identified on page 1-6 of the Final EIR. Numerous alternatives were evaluated downstream of the UPRR bridge. Please refer to the "Overview of Changes from Draft to Final EIR" at the beginning of the Final EIR and Master Response A in chapter 3 for a discussion of the definition of project boundaries.

The CEQA review process also included circulation of an NOP in April 2000 and at several scoping meetings, open-house meetings, and meetings with resource agencies to get early input on the content and approach to the Draft EIR. The Final EIR presents a feasible Baylands Mitigation Measure package that balances the need to address flooding issues downstream of the UPRR with the need to implement a flood protection project within a reasonable timeframe for a reasonable cost. Substantial discussion of Baylands Mitigation Measure impacts is presented in chapter 3 of the Final EIR. The analysis of impacts in the baylands area was not short-changed by the definition of the Proposed Project. Baylands Mitigation Measure impact analyses are presented for 14 separate topical sections in the Final EIR. All of the potential environmental impacts that could result from implementing Mitigation Measures HH-1 through HH-4 have been disclosed.

Response to Comment 17-2

The project area definition appears to violate the provisions of the District's 1992 LCA with the Corps to convey floodwaters through the lower reaches of the Guadalupe River to San Francisco Bay. Therefore, LCA funding cannot be used to implement this project until this basic requirement is met.

The LGRP has been proposed specifically to meet the requirements of the LCA. Project objectives presented on page 1-6 of the Final EIR indicate that flood protection goals should be met in a manner consistent with LCA goals. The Corps has indicated that the LGRP is consistent with the provisions of the LGRP (see letter dated May 15, 2002 from the Corps to the District in appendix H). The LCA is intended to ensure that required capacity in the lower Guadalupe River is available before improvements to the downtown reach of the river are implemented. The Proposed Project with the Baylands Mitigation Measure is a feasible and appropriate flood protection solution that meets the District's needs to provide practical flood protection in areas adjacent to the lower Guadalupe River.

Response to Comment 17-3

The District failed to consult with Cargill in the "early public and interagency consultation" about its plan to flood Cargill's salt ponds.

The District has implemented an extensive public and agency outreach program for the LGRP EIR and has gone beyond what is required by CEQA and the State CEQA Guidelines to ensure that early input into the environmental review process occurs.

After determining that preparation of an Environmental Impact Report (EIR) was needed for the LGRP, the District prepared a Notice of Preparation (NOP) and submitted it to numerous entities for comment, including Cargill Salt Company. The NOP contained a description of the LGRP as well as the project's probable environmental effects. The District did not receive any comments on the NOP from Cargill Salt Company.

The LGRP Plan formulation effort included community interviews with numerous organizations and individuals during February/March 2000. Bob Douglas of Cargill Salt Company was among those interviewed.

Project open house meetings were conducted in Alviso on January 27, 2000, and March 21, 2001. A public scoping meeting for the EIR was held in San Jose on May 3, 2000. In addition, 3 newsletters were sent to more than 4,000 residents and property owners within the project area, including Cargill Salt.

These meetings occurred before the Draft EIR was released. In addition, the District conducted open-house and scoping meetings in 2000, early in the project development process.

Response to Comment 17-4

The "Existing Conditions" section of the Draft EIR inaccurately describes the Guadalupe River watershed as terminating at the UPRR bridge. The effect is to *exclude Alviso Slough from the watershed; this segment should have been designated as reach H of the project. This mistake sets the stage for the Draft EIR's mistaken and truncated project description.*

Please refer to Master Response A in chapter 3.

Response to Comment 17-5

The Draft EIR underestimates the flooding impacts of the Proposed Project by assuming that flooding currently occurs in Cargill's salt ponds.

According to the State California Environmental Quality Act (CEQA) Guidelines, "existing" conditions are determined at the date that the NOP is published. Under the existing conditions, flows greater than 192 cms (6,800 cfs) with the 10-year design tide would begin to overtop the levee and spill into pond A8W. The design flow and boundary conditions are theoretical conditions that are the basis for project design and project comparison.

The discussion on page 3A-9 of the Final EIR states that during the floods in 1995, Cargill's salt ponds and Alviso were inundated. The discussion did not specify the date of flooding in the ponds. However, the District has photos and other documentation indicating that overflows from Alviso Slough into Pond A8 occurred in March 1995.

Figure 3-5 in the Final EIR shows the limits of the 1% flood in the Central Flood Control Zone, which includes the project. The Cargill salt ponds to the west of Alviso Slough are within both the District's Central and Western Flood Control Zones. The division of the salt ponds by the flood control zones has added some confusion to the limits of flooding in the Baylands. Portions of the salt ponds on either side of Alviso Slough are shown to be within the limits of the 1% floodplain. Flooding does not stop at the zone boundary, it is just not shown on this figure. The entire salt pond complex is within the FEMA delineated 100-year floodplain.

Response to Comment 17-6

A major flaw of the analysis is that the Draft EIR arbitrarily excludes reach H from the project area. Treating the planned improvements (downstream of the UPRR) as mitigation measures rather than part of the project itself violates CEQA. The project must include the portion of the Guadalupe River between the UPRR bridge and the bay.

Please refer to Master Response A in chapter 3.

Response to Comment 17-7

The District has no reason to treat the downstream improvements differently from the improvements upstream of the (UPRR) bridge in this EIR. Mitigation Measures HH-1 through HH-4 are similar, if not identical, to other proposed flood control improvements upstream of the UPRR bridge. It is a fiction to treat them as mitigation measures. They are part of the project itself. Excluding these measures from the project allows the District to avoid discussing alternatives to these improvements and to perform only a superficial, reconnaissance-level study of the area.

Please refer to Master Response A, C, and D in chapter 3.

The Baylands Mitigation Measure (collectively, Mitigation Measures HH-1 through HH-4) is a set of feasible measures that are intended to reduce flooding impacts of the Proposed Project on downstream areas. Hydraulic analyses performed assuming these mitigation measures indicate that the approach to reducing induced Guadalupe River flooding impacts that is described in the Final EIR is effective. They further indicate that such an approach strikes a reasonable balance between the need to reduce the potential for flooding in Alviso and the temporary effect on the depth and duration of salt pond flooding. This solution also allows for minimal impacts on sensitive wildlife resources in New Chicago Marsh and along Alviso Slough. The Final EIR not only recommends feasible mitigation measures for induced flooding downstream of the LGRP area, but also presents a discussion of the potential impacts that could result from implementing these measures as required by State CEQA Guidelines Section 15126.4(a). The Final EIR discussion of Baylands Mitigation Measure impacts is substantial and covers all of the reasonably foreseeable impacts that could result from these measures. The analysis necessary to properly evaluate and mitigate these impacts under CEQA has not been short-changed by the fact that they accrue from mitigation measures.

Response to Comment 17-8

The Draft EIR fails to discuss the inconsistency between the proposed use of Cargill's salt ponds as flood retention ponds under the project and their existing use for the commercial production of salt. Constructing the weir and flooding salt ponds is a significant conflict with existing land use.

Hydraulic analyses used in the Final EIR (see table 3-4) show that under existing conditions, Ponds A5, A7, and A8W would flood to between 1.8 and 2.6 meters (6.0 and 8.5 feet) under the design flood, similar to (but more extensive than) what occurred at the salt ponds on March 10, 1995. This existing level of flooding could have an effect on Cargill's salt-making operations. When the design flow under the Proposed Project is considered, depth of flooding in the same ponds would be 2.1 and 2.9 meters (7.0 and 9.5 feet), an increase of approximately 0.3 meter (1.0 foot). Under cumulative conditions, depth of flooding in the ponds would be between 2.4 and 3.2 meters (8.0 and 10.5 feet). In judging whether the Proposed Project would result in a significant land use conflict, the proposed condition is judged against the existing condition. Because substantial uncontrolled flooding is already known to occur in Cargill's ponds, the Proposed Project would not create the land use conflict, but could potentially increase the depth and duration of flooding in the salt ponds. Mitigation Measure HH-2 is proposed to ensure that a more controlled flow condition would occur at the current levee break location, and Mitigation Measure HH-3 is proposed to evacuate the Proposed Project's portion of the pond flooding. This mitigation approach would not change the existing flood condition, but would mitigate the Proposed Project's contribution to this existing condition.

The District did not evaluate the economic impacts of the LGRP on Cargill's salt production operations because the proposed mitigation measure would provide an improvement to the existing flooding conditions in Cargill's ponds (please refer to memorandum dated April 25, 2002, from CH2M Hill to the District in appendix I). Under CEQA, economic changes resulting from the project are not considered impacts on the environment (Guidelines Section 15064(f)).

Response to Comment 17-9

The Draft EIR underestimates the flooding impact of the proposed improvements.

Please refer to Response to Comment 18-1.

Response to Comment 17-10

The Draft EIR makes no attempt to quantify the loss and injury that Cargill's salt-making operations would experience as a result of the project. The Draft EIR therefore lacks any basis on which to conclude that Cargill's loss and injury can be reduced to a level of less than significance. Flooding of Cargill's salt ponds would cause millions of dollars of loss and injury to Cargill's salt-making operations, even after the proposed mitigation measures are implemented.

The District is coordinating with Cargill to address Cargill's concerns regarding potential impacts of the LGRP to their salt operations. The District believes it has reached an understanding with Cargill regarding the acceptability of flooding of the salt ponds and mitigation. In the event that any problem develops in implementing this understanding, the District possesses condemnation powers to ensure that Cargill's properties can be used for flood control purposes. Please also refer to Response to Comment 17-8.

Response to Comment 17-11

The Draft EIR fails to analyze the potential for flooding events to weaken internal salt pond levees.

Please refer also to Responses to Comments 16-4 and 17-8. The District did consider the potential for impacts on internal salt pond levees. As indicated in Response to Comment 17-8, flooding under existing conditions, without the Proposed Project, would already have a substantial impact on internal salt pond levees. Therefore, it is reasonable to assume that existing conditions and not the Proposed Project conditions would be responsible for impacts on Cargill levees. With the recommended mitigation measures, Cargill would benefit from a more controlled, infrequent flooding condition and pumping of ponds to return water levels to better than existing conditions in less time than under existing conditions.

Response to Comment 17-12

The Draft EIR underestimates the amount of sediment and debris that would be deposited into the Cargill Salt Ponds. The analysis is flawed because an inconsistency exists in the increase in flood volumes and pond pumping would not occur until 2 weeks or more after a flood event. Sediments would have settled out of floodwaters by then.

The reference to an 18% change in volume on page 3B-13 is based on the total flood volume change that would occur in all of the salt ponds evaluated. Page 3A-16 (table 3-5) of the Final EIR has been revised based on more recent UNET model runs that indicate increased flood volumes ranging from 15% to 21% in the salt ponds west of Alviso Slough. Under the LGRP, sediment deposition from inflows would remain the same in ponds A13 and A15.

The analysis on page 3B-13 of the Final EIR has been amended to include additional information that supports the conclusion that the sediment deposition impact would be less than significant. Factors influencing this conclusion include implementation of an LGRP sediment management program, which would reduce the amount of sediment available to be deposited downstream, and implementation of soil management and erosion and sediment control measures as part of the LGRP and other upstream projects. The District does not believe that the Proposed Project would increase the potential for debris to be deposited in the Cargill ponds; less debris would be available in the lower Guadalupe River as a result of the LGRP vegetation management program, and flood volumes would not increase substantially under the Proposed Project compared to existing conditions.

Response to Comment 17-13

The Draft EIR underestimates impacts on special-status species. Periodic flooding of Pond A8D could result in loss of snowy plover habitat by eliminating the light salt crust in the pond and could encourage vegetation to grow as well as change the pond bottom coloration.

Under existing conditions, when Pond A8D floods, pumps are used to remove ponded water from the nesting substrates. The LGRP would increase the depth of ponding in A8D to 2.1 meters (7.0 feet), an increase of 0.3 meter (1.0 foot). To avoid this impact, an additional 1.4-cms (50-cfs) pump would be operated, in addition to the pumps already used, to increase the rate of drainage and allow Pond A8D to drain faster. No additional salt or food resources would be removed; these resources would only be removed faster.

The comment includes the assumption that periodic flooding would dissolve the salt crust of the surface of the alkali pan and allow vegetation to grow. This situation has been observed at Bair Island, where a former salt pond is breached and the pond floods and drains on a regular basis. Some salt would become suspended in the water column and removed from the system during each flood event. Overtopping of the levees and flooding of the salt ponds would be a rare event, caused only by a combination of high flows coupled with high tides, or very high flows. The frequency of overtopping of the levees would not change from that under existing conditions. Occasional flooding and draining would not completely remove the salt crust or allow vegetation to grow; for example, the salt panne persists despite vernal flooding in the New Chicago Marsh. Further, Pond A8D was flooded and pumped during the levee breach of San Tomas Aquino Creek in 1998, and snowy plovers nested here in 1998, 1999, and 2000 (Ryan and Parkin 1998, H. T. Harvey & Associates 1999, Ryan 2000).

A second comment is that flooding would alter the nesting substrate enough to prevent nesting by snowy plovers. Snowy plovers that nest in San Francisco Bay prefer to nest on soil colors similar to the color of their mantle (back), and nest on a wide range of textures, ranging from loose soils to completely salt encrusted soils (Feeney and Maffei 1991). Once the soil dries after a flood event, the soil color should not be changed significantly by flooding and subsequent pumping operations. This suggests that if the color is the same and the texture is similar after a flood event, there would likely be little impact on use by snowy plover. Again, snowy plovers have bred in this pond after previous flood events.

Regarding pumping eliminating significant food sources, loss of brine shrimp, cysts, and invertebrates certainly occurs when pumping takes place. Ponds throughout Cargill Salt Division's system are pumped regularly as part of their regular operations. Food resources are present in these ponds (Lonzarich 1989). There is no evidence to suggest that the infrequent flooding and pumping would cause a catastrophic loss of prey for foraging shorebirds.

Response to Comment 17-14

The mitigation measure for pumping water from Pond A8D appears to be geared toward the nesting season. There is no analysis of the impact of floodwaters on winter (non-nesting) habitat for the snowy plover.

Pumping water from Pond A8D would not impair conditions for wintering (non-nesting) snowy plovers. The Proposed Project, along with implementation of Mitigation Measure HH-1 through HH-3, would increase the depth of ponding in Pond A8D to 2.1 meters (8.0 feet), an increase of 0.3 meter (1.0 foot). To mitigate this impact, a 1.4-cms (50-cfs) pump would be operated to increase the rate of drainage and allow it to drain at least as quickly as under existing conditions. Under this alternative, the surface of the pond would be exposed at the same time or sooner than under existing conditions and be available for foraging by snowy plovers and other wintering shorebirds.

Response to Comment 17-15

Flooding in Ponds A5, A7, and A8W would cause a loss of nesting habitat for breeding birds.

Current modeling of the depth and duration of flooding in the Cargill ponds indicates that flooding events would be infrequent and that the depths of flooding would be only slightly greater than under existing conditions. The LGRP would not change the frequency of flooding, only the depth of flooding. The Baylands Mitigation measure will rapidly reduce the depth of flooding and reduce the duration of flooding. Therefore, the Proposed Project with the Baylands Mitigation Measure would not be expected to change breeding bird habitat significantly compared to existing conditions.

Response to Comment 17-16

The assumption that the salt ponds are regularly flooded under existing conditions is wrong. An incremental impact on fish habitat and anadromous fish migration needs to be evaluated.

The LGRP does not assume that the salt ponds are regularly flooded under existing conditions. Please refer to Responses to Comments 17-8 and 18-2. Pages 3G-20 and 3G-21 of the Final EIR address the potential for fish migration impacts from the Proposed Project with the Baylands Mitigation Measure. This analysis indicates that the impacts on migrating Chinook salmon and steelhead are anticipated to be minimal because the ponds would be flooded infrequently and for short durations and that the frequency of salt pond flooding and stranding potential under the Proposed Project would be similar to existing conditions. Please refer to Master Response E in chapter 3.

Response to Comment 17-17

Pumping salt ponds is not an adequate remedy to proposed flooding because this pumping does not restore salt ponds to production. The amount of pumping proposed by the District is not adequate because it does not restore salt pond water levels to pre-flood levels. The concept that the ponds already are being flooded to some theoretical level is fiction. Furthermore, to the extent there are flood risks under existing conditions, they have been caused by prior District activities.

The District is coordinating with Cargill to address Cargill's concerns regarding potential impacts of the LGRP to their salt operations.

Response to Comment 17-18

Constructing an overflow weir into the levee would be an illegal taking of Cargill's property without compensation. As such, this mitigation measure is beyond the power of the District to impose. If the District wishes to use Cargill's ponds as flood detention basins, it must purchase them for that purpose.

The District is coordinating with Cargill to address Cargill's concerns regarding potential impacts of the LGRP to their salt operations. The District believes it has reached an understanding with Cargill regarding the acceptability of flooding of the salt ponds and mitigation. In the event that any problem develops in implementing this understanding, the District possesses condemnation powers to ensure that Cargill's properties can be used for flood control purposes.

Response to Comment 17-19

The Draft EIR simply assumes, without any analysis, that there would be sufficient capacity in Cargill's ponds to accommodate an unknown quantity of floodwaters. To make this mitigation work, Cargill would be required to significantly alter the operation of its salt pond system to ensure sufficient capacity in the ponds to the detriment of its salt-making operations.

The District is coordinating with Cargill to address Cargill's concerns regarding potential impacts of the LGRP to their salt operations. Please also refer to Response to Comment 17-8. The District believes it has reached an understanding with Cargill regarding the acceptability of flooding of the salt ponds and mitigation. In the event that any problem develops in implementing this understanding, the District possesses condemnation powers to ensure that Cargill's properties can be used for flood control purposes.

Response to Comment 17-20

One of the major errors in the Draft EIR is that it erroneously concludes that the cumulative effect of the operation of the LGRP in combination with other projects on the Cargill salt ponds would be the same as the project-level effects. The Draft EIR cannot exclude impacts from Guadalupe Slough or Coyote Creek flows in the salt ponds if these water bodies contribute floodwaters to the ponds during peak flows.

The UNET modeling conducted for the baylands area has included assumptions for floodflows expected in Coyote Creek and Guadalupe Slough during the design flood event. The salt pond flooding levels identified in tables 3-4 and 3-5 of the Final EIR for the Proposed Project take into consideration potential for flooding for sources other than the Guadalupe River. Because no other projects have been identified in the baylands area that could contribute to cumulative flooding impacts on the Cargill ponds, the flooding analysis for the Proposed Project effectively represents the cumulative flooding conditions in the Cargill ponds and other bayland areas. Details of this approach are contained and referenced in chapter 5 of the LGRP Engineer's Report.

Response to Comment 17-21

The Draft EIR's focus on a single watershed is a serious failing, as both the Guadalupe watershed and the West Valley watershed flow toward Cargill's ponds. If peak flows from both watersheds arrive simultaneously at the perimeter of Pond A8, the situation would be dramatically different from the events analyzed in the Draft EIR.

The District disagrees with this comment. The Final EIR has evaluated a reasonable flooding condition in the baylands assuming the proposed design floodflow and other flood contributions to the baylands. The westside tributaries were assumed to have simultaneous 1% floodflows, coincident with the flood peak on the Guadalupe River.

Response to Comment 17-22

A further error in the cumulative impacts analysis of the Draft EIR is the assumption that the Cities of San Jose and Santa Clara would cease or restrict their emergency pumping of local stormwater into the Guadalupe River when the river reaches capacity at 17,000 cfs. Unless the District can guarantee that these cities, residents, and businesses would act against their own interests, the Draft EIR must assume there would be significant additional flows as a result of local actions in the cumulative impacts analysis.

The Proposed Project is able to accommodate for up to an additional 1,350 cfs from the Cities' pump stations and outfalls. Please refer to Master Response B.

Response to Comment 17-23

The Draft EIR does not include an adequate range of alternatives because it artificially terminates the project at the UPRR bridge. The Draft EIR should include an alternative that would reduce the induced flooding impacts in the town of Alviso and the Cargill salt ponds.

The Final EIR presents an adequate range of alternatives as required under CEQA and the State CEQA Guidelines. The District disagrees with the argument that an adequate range of alternatives was not considered in the Draft EIR because of its choice in defining the LGRP limits. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. Alternatives must be limited to ones that meet the project objectives, are feasible, and would avoid or substantially lessen at least 1 of the significant environmental effects. Please refer also to Master Responses A, B, C, and D in chapter 3.

Response to Comment 17-24

The Draft EIR fails to contain any analysis of alternatives to convey floodflows to San Francisco Bay. Instead it pretends that the reach of the river downstream of the UPRR bridge is not even part of the project description at all. This is a serious violation of CEQA and the District's own public assurances that a full range of alternatives will be addressed.

The District has fully disclosed its project description and objectives in the Final EIR and has met both the letter and spirit of CEQA and the State CEQA Guidelines for disclosure of project impacts. The environmental review process allows for disagreement between experts on the alternatives and impacts of alternatives. Please refer to Master Responses A, B, and C in chapter 3.

Response to Comment 17-25

The Proposed Project is not consistent with the flood protection policies of the City's General Plan regarding the goal to protect the community from risk of flood damage; therefore, it should not be approved. The Proposed Project would purposefully flood Cargill's salt ponds to protect other properties in the community.

Please refer to Response to Comment 17-26.

Response to Comment 17-26

The LGRP violates City General Plan Policy 1: New development should be designed to provide protection from potential impacts of flooding during the 1% or 100-year flood. The District's project constitutes new development, yet this new development is not designed to protect Cargill's property from damage from the 100-year storm. Cargill's property is being sacrificed to provide this protection to other properties.

The LGRP is not considered "new development" under the City General Plan Policy 1. In the City's General Plan, new development refers to "development of adopted land uses, proposed roadway improvements, various land use changes, and increased residential development within the City" (City of San Jose 1994, p. 144).

Nevertheless, the District has designed the LGRP to provide 100-year protection for areas of San Jose and Santa Clara adjacent to the Guadalupe River and is consistent with the District's LCA with the Corps. The Final EIR addresses this potential for downstream flooding (page 3A-13) and has indicated that this potential impact is considered significant. Mitigation Measures HH-1 through HH-4 (collectively called the *Baylands Mitigation Measure*) have been recommended to reduce this impact to an acceptable level. Although the Proposed Project would not provide 100-year flood protection to all floodplain areas of San Jose and Santa Clara, it would substantially meet the intent of Policy 1 because flood protection would be greatly improved compared to existing conditions. Please refer to Master Response B in chapter 3, and also to Response to Comments 12-32 and 12-33.

Response to Comment 17-27

The Proposed Project is not consistent with Storm Drainage and Flood Control Policy 12, which requires new developments to be designed to minimize potential damage resulting from storm waters and flooding to the site and to other properties. It is also not consistent with Storm Drainage and Flood Control Policy 13, which requires that design of improvements to creeks and rivers should include protection of adjacent properties from flooding.

Please refer to Response to Comment 17-26. The LGRP would improve local drainage conditions and substantially protect adjacent properties from flooding by ensuring that the design floodflow is contained within the levees of the lower Guadalupe River. Implementing this project would also allow operation of upstream flood protection facilities, thus reducing the potential for catastrophic flooding related to potential overtopping of levees. Please also refer to Responses to Comments 12-32 and 12-33.

Response to Comment 17-28

The Draft EIR is not adequate and needs to be revised and re-circulated to correct the deficiencies pointed out in this letter. The project scope needs to be redesigned to include means to convey floodwaters to San Francisco Bay. The District's flood control responsibilities do not stop at the UPRR bridge. Until this is accomplished, the Draft EIR will remain legally inadequate since it fails to disclose the project's full scope and environmental impacts.

The District has determined that the LGRP Final EIR is adequate and substantially meets the requirements of CEQA and the State CEQA Guidelines.

No new or more severe significant impacts have been identified in the Final EIR that could not be reduced to a less-than-significant level. All impacts were previously disclosed during the public review period. Therefore, the District has determined that re-circulation of the Draft EIR is not required. Please refer to Master Response A in chapter 3 for discussion of project boundaries.

Comment Letter 18—Schaaf & Wheeler Consulting Civil Engineers, Kirk Wheeler, P.E., Principal (October 15, 2001)

Response to Comment 18-1

The Draft EIR overestimates existing flood potential.

Recent hydraulic analyses of channel capacity and water surface profiles reported in the Final EIR for Alviso Slough for the 481-cms (17,000-cfs) peak flow design event and existing conditions are not intended to duplicate conditions or previous modeling assumptions from 1982. The District is aware of significant morphologic and hydrologic changes that have occurred in the study area since 1982. Therefore, the boundary conditions and modeling assumptions used to develop the hydraulic results reported in the Final EIR for Alviso Slough are intended to depict present conditions based on the best available data. A 10-year tide was used as the tidal boundary condition for the design event and existing channel conditions. Recent analyses and reporting completed by the Corps and the District used the same 10-year tide with the design event for the hydraulic analyses of the Coyote Creek Flood Control Project. FEMA and the Corps commonly prescribe this combination of downstream tide and design flow as a prudent set of boundary conditions for planning and design purposes.

Regarding channel roughness, CH2M Hill and Northwest Hydraulic Consultants (NHC) used the same energy loss coefficients and channel cross sections that had been specified by the District in its 1997 HEC-2 model of Alviso Slough. The District developed the model based on their most recent observations of high flow conditions in 1995 and 1997 in the Lower Guadalupe River and Alviso Slough. Channel roughness for the slough is 0.03 for the main channel and 0.2 for heavily vegetated in-channel tidal bench areas. Tidal benches are heavily vegetated with thick stands of tall tules. Top-of-levee profiles for Alviso Slough have been updated with recent levee survey data provided by Cargill. NHC agrees with the magnitude of the roughness values for the main channel and vegetated tidal flood benches that the District prescribed for existing conditions.

Response to Comment 18-2

The hydraulic model calibration is not appropriate for Alviso Slough existing conditions.

The hydraulic model used in the Final EIR was calibrated using available data provided to CH2M Hill and NHC for the March 10, 1995, flood event. High-water mark data from the event were provided by the District and extend from station 6+600 near the UPRR bridge to station 17+612 at I-880. The District estimated the high-water mark elevations using photogrammetry and aerial interpretation of the photographs shot on March 10, 1995, near the peak of the event. Unfortunately, there are very few estimated high-water elevations available below the UPRR bridge. The District is unaware of any other measured high-water-profile data available for Alviso Slough downstream of the UPRR bridge. However, the District is aware that during the peak of the 1997 flood event, water in Alviso Slough was within a few inches from overtopping the crest of the Alviso Marina parking lot and spilling into Alviso. Aggressive sand bagging along the top of the parking lot prevented overtopping of Alviso Slough waters during the 1997 flood event. This anecdotal information was also considered during the development and adjustment of the existing conditions model.

Schaaf & Wheeler states that "Based on Cargill records, there were no overflows from Alviso Slough in either January 1995 or January 1997. The District has photos and other documentation indicating that overflows from Alviso Slough into Pond A8 did occur both years." Please note that the Guadalupe River flood of record occurred in March 1995 rather than January.

Response to Comment 18-3

The existing-conditions hydraulic model uses conservative design values.

The District does not agree that the existing-conditions model is overly conservative. Please refer to Responses to Comments 18-1 and 18-2 above, which address questions raised about the selection of channel roughness and starting tidal water surface elevation conditions. To compare system performance for existing conditions to with-project improvements, it is the state and federal standard to use the same consistent set of global boundary conditions for tide and flow that are likely to occur during the design event. Because no in-channel maintenance is prescribed for the reach downstream of the Alviso Marina, the same set of main channel and tidal bench roughness values are used for both existing conditions and with-project conditions. Therefore, the only changes made to the with-project improvements model reflected changes in channel geometry, channel roughness resulting from prescribed maintenance in the reaches upstream of Alviso, and other physical/structural modifications proposed by each project improvement.

Response to Comment 18-4

The Draft EIR underestimates existing slough capacity.

Existing channel capacity was properly determined; however, there is a confusing statement in the Draft EIR that says the "existing channel capacity is 6,800 cfs." This statement is referring to the approximate river discharge at which flow just begins to overflow across the low portion of the west levee into

Cargill Pond A8. Flows greater than that continue to spill into the west ponds with the remainder of the flow continuing downstream in Alviso Slough. The statement was not intended to reflect the overall flow capacity of Alviso Slough, which is approximately 283–311 cms (10,000–11,000 cfs). This misleading statement has been corrected on page 3A-13 of the Final EIR.

The percentage of flow spilled into the west ponds during the 1995 event versus that percentage that continued down Alviso Slough is unknown, however, photographs and other documents show that a significant amount of flow did spill into Pond A8 during that flood. The amount of flow that spills into the west ponds and the amount of flow continuing down Alviso Slough downstream of Alviso is function of the depth of water going over the low portion of the levee which is controlled by river stage and the dynamic tidal influences occurring in the Bay. Dynamic modeling of the Baylands (the Bay, sloughs and ponds) performed during the analyses described in the Final Engineers Report properly accounts for these effects.

Response to Comment 18-5

The Draft EIR fails to assess the impacts of smaller flood events.

CH2M Hill and NHC assessed 2 design flood scenarios:

- existing conditions, which assumes that only a 396-cms (14,000-cfs) peak discharge reaches Alviso Slough because of limited channel capacity upstream of SR 237; and
- "with-project conditions," which could deliver a peak discharge of 481 cms (17,000 cfs) (assuming no pumping) to Alviso Slough during the design flood.
- "with-project conditions," which could deliver a peak discharge of 520 cms (18,350 cfs) (assuming pumping) to Alviso Slough during the design flood.

Proposed project mitigation features in the Baylands are intended to control in-channel flows in Alviso Slough so that peak flows and water surface elevations in the Slough will be less than or equal to those that would occur during the design event under existing conditions. A 305 meter (1,000-feet) long engineered weir located at the low spot in the west levee will improve the reliability and efficiency of spills into Pond A8, thus improving flow and stage conditions in Alviso Slough during flood events that lead to spilling into A8 and reducing the likelihood of a failure of the levee as compared to existing conditions. Flood events of lesser magnitude were not evaluated, as the LGRP will not impact floods of lesser magnitude.

Response to Comment 18-6

The Draft EIR fails to adequately assess pond flooding impacts.

Hydraulic analyses of a design event that includes the added flow and volume from interior drainage facilities from I-880 to UPRR were conducted. As part of the LGRP mitigation plan, the District is committed to pumping Pond A8D and A6 down to pre-flood (dry) conditions after flood events. Because A8D is only separated from the other ponds by a low elevation interior levee, when it is pumped dry the water surface elevations in the surrounding ponds will also be reduced to the elevation of the lowest portion of the A8D interior levee. Therefore, it is anticipated that the water surface elevations in the west ponds will be significantly lowered by the post-event pumping within a period of a few weeks to a few months, depending on the severity of the flood event. Pumping the ponds down after flood events will reduce the effects of long-term high water levels and wave action against the interior and outboard levees. Some overtopping and/or wave erosion may occur on interior levees. However, events of the magnitude necessary to cause the interior ponds to fill are rare and very infrequent. Please refer to Responses to Comments 16-4, 17-8, and 17-11.

Comment Letter 19—South Bay Yacht Club, Russell H. Robinson, Staff Commodore (September 30, 2001)

Response to Comment 19-1

This plan would fall short of providing lasting flood protection. The project should be designed and maintained to the worst scenario presented in the 100-year flood. This plan does not adequately address that situation and in my opinion falls short of applying all of the contributing factors that should be considered in determining the actual (flood) threat.

Please refer to Master Response B in chapter 3. The LGRP is designed to convey the design flood event as required in the District's LCA with the Corps. That LCA requires the District to provide a flood protection project that would adequately convey upstream flows before upstream flood protection projects are operated. The LGRP represents the best combination of capital improvement and maintenance elements to meet the flood conveyance needs in a financially responsible manner and in the timeframe needed to meet the LCA requirements.

Please refer to Response to Comments 12-32 and 12-33 for a discussion of local drainage.

Response to Comment 19-2

It also poorly represents what maintenance would be required and how that maintenance would be accomplished. The maintenance problem has grown significantly worse without any action on the part of the District.

Under existing conditions, the District does not have the necessary clearances and permits to manage vegetation and sediment in the lower Guadalupe River. The LGRP would allow the District to conduct such maintenance activities and thereby improve existing conditions.

The Proposed Project recommends a specific vegetation and sediment management program to ensure that lower Guadalupe River "as built" channel capacity is maintained for the life of the project. Chapter 2 of the Final EIR summarizes planned maintenance and chapter 6 of the Engineer's Report provides a detailed reach-by-reach description of required maintenance activities.

Response to Comment 19-3

Since the last lower Guadalupe project in 1983, no adequate maintenance has been done in the riverbed in and around Alviso. Nonnative trees and weeds have been allowed to grow unchecked, causing greater-than-normal siltation. The lack of channel maintenance nearly resulted in a disaster in 1995.

Under existing conditions, the District does not have the necessary clearances and permits to manage vegetation and sediment in the lower Guadalupe River. The LGRP is intended to correct the channel conditions referred to in this comment. The Final EIR and resource agency permits would allow the District to adequately maintain vegetation and sediment in the lower Guadalupe River, and the recommended Baylands Mitigation Measure includes vegetation management in a limited area downstream of the UPRR bridge that will provide hydraulic benefits.

Response to Comment 19-4

It is my opinion that a significant safety factor should be allowed in the river flow estimates. The estimates should take into consideration the limited capacity to do maintenance, existing storm pumps, and expansion of hard surfaces in developments next to the river.

The Proposed Project specifically recommends stringent channel maintenance activities to ensure that the lower Guadalupe River is capable of conveying the design flood event. Hydraulic analyses show that the Proposed Project would meet the project objectives with the required safety factor (levee freeboard).

Please refer to Response to Comment 19-2 and 19-3 on maintenance, 12-32 and 12-33 on pumping, and 15-2 on new development.

Response to Comment 19-5

No sediment or vegetation control has been done in the downstream section near Gold Street or the UPRR bridge. The lack of maintenance in this area has been pointed out to the District. The levees were also raised in this area after the 1995 flood.

The 1983 design called for sediment maintenance in reaches B through E; no maintenance was suggested in reaches F or G. A large portion of the sediment accumulating in reaches F and G is due to tidal deposition. The Proposed Project specifically recommends aggressive vegetation management in reach G. Please refer to the chapter 2 of the Final EIR and chapter 6 of the Engineer's Report. The Baylands Mitigation Measure also recommends vegetation management downstream of the UPRR bridge to provide additional hydraulic benefits.

Response to Comment 19-6

The capacity of the channel should be accurately calculated. Is it 12,000 cfs or 14,000 cfs?

On p. S-2 of the Final EIR, it states that in 1963, improvements were made to increase the channel capacity to 340 cms (12,000 cfs). On p. S-3 of the Final EIR, it states that in 1983, the District again made improvements to increase conveyance capacity to 481 cms (17,000 cfs). Since that time, the river capacity has been reduced due to accumulation of sediment and vegetation. Because the maximum recorded flow is only 311 cms (11,000 cfs), it is not possible to determine the channel capacity by direct measurement. The project engineers have developed and calibrated a model to estimate existing and post-project conditions.

The existing capacity of the channel as described on page 3-19 of the LGRP Engineer's Report is as follows: From UPRR upstream to SR 237, the channel capacity is about 481 cms (17,000 cfs). Above SR 237 and upstream to Montague Expressway, the overall channel capacity drops to approximately 396 cms (14,000 cfs), although some sections of this reach are capable of conveying up to 438 cms (15,500 cfs). Please refer to table 3-2 of the Engineer's Report.

Response to Comment 19-7

There is not an effective maintenance plan in place on the lower Guadalupe River. If there is a plan focused on restoring channel capacity to 17,000 cfs, it has not been implemented to my knowledge.

The reference to channel maintenance on page S-3 of the Final EIR indicates that the District does manage vegetation growth in certain areas of the lower Guadalupe River. The limited management was reduced in 1992 to protect wildlife values. Current planning for the LGRP has focused on restoring channel capacity to approximately 481 cms (17,000 cfs). The level of maintenance needed to maintain the "as built" condition has been found to be inadequate on the lower reaches of the Guadalupe River.

Response to Comment 19-8

The District's 1983 project included a reach from the UPRR to the County Marina. This additional reach should be included in the proposed effort and not called a mitigation measure. Without significant attention to this reach, the waters cannot pass through safely and flooding may well occur.

Please refer to Master Response A in chapter 3 and Response to Comment 17-7. The Proposed Project with the Baylands Mitigation Measure would reduce downstream flooding impacts of the LGRP to a less-than-significant level.

Response to Comment 19-9

We concur that this project must be completed adequately before the bypass channels through San Jose area are allowed to be opened. To do so with the knowledge that property and lives downstream might be in danger from flooding is contrary to law and could result in significant litigation.

The Proposed Project would reduce flooding impacts and hazards adjacent to the lower Guadalupe River by conveying the LCA design flood event within the raised levees. The potential for downstream flooding in the community of Alviso and in the Cargill salt ponds would be reduced to a less-than-significant level by implementing the Baylands Mitigation Measure. Operation of the bypass systems in the Guadalupe River Project area (Downtown) is contingent upon completion of and Corps certification of the LGRP's ability to convey the LCA design flood to the Bay.

Response to Comment 19-10

The comment expresses concern about whether an adequate channel maintenance program would be implemented for the project.

The Proposed Project recommends a comprehensive vegetation and sediment management program to ensure that the design flood event would be conveyed within the lower Guadalupe River channel. The District would obtain the required permits to ensure that channel maintenance is allowed in all of the management areas described in the Final EIR and LGRP Engineer's Report. The District is committed to funding future vegetation and sediment maintenance of the lower Guadalupe River.

Response to Comment 19-11

Sediment is not now controlled. To expect that it could be done effectively in a box culvert in a cost-effective manner is very questionable.

The District acknowledges the commenter's opinion regarding maintenance under the Channel Bypass Alternative. The Channel Bypass Alternative is not the Proposed Project.

Response to Comment 19-12

Vegetation removal associated with the overflow weir (Baylands Mitigation Measure) should be extended past the County Marina. Without this buffer area, cleared areas would rapidly fill back in and reduce the capacity of the river, placing the community of Alviso at risk.

The UNET hydraulic modeling conducted for the Baylands Mitigation Measure area indicates that the recommended Mitigation Measures HH-1 through HH-4, as presented in the Final EIR, would eliminate Guadalupe River-induced flooding in the community of Alviso. These mitigation measures do not require the removal of vegetation down to or beyond the County Marina. Mitigation Measure HH-4, "Manage Vegetation in Alviso Slough from UPRR to Overflow Weir," would require periodic vegetation removal in this area to ensure that the overflow weir functions as designed. Extending vegetation and sediment management downstream to past the County Marina would not provide hydraulic benefit to the Alviso weir. However, no hydraulic benefit to the overflow weir would be obtained by removing vegetation downstream of the weir.

Response to Comment 19-13

Strong consideration should be given to removal of all nonnative plants in the riverbed. Bulrushes reduce the capacity of the channel and are the habitat of large rats. These rodents present a threat to other wildlife, including shorebirds.

The LGRP vegetation management plan recommends excavating reach G outside of the low-flow buffer area to remove dense areas of vegetation to improve conveyance capacity in this reach of the river. This relatively aggressive vegetation management action would create improved conditions for wildlife, including shorebirds.

Response to Comment 19-14

Mercury deposits have been washed down from upstream mines. The area in the baylands should be treated in the same way that other areas in all of the Guadalupe projects have been treated.

Please refer to Response to Comment 2-4.

Response to Comment 19-15

Sediment and vegetation maintenance should be included in the project downstream past the County Marina. Strong consideration should be given to *incorporating the County Marina into the overall design. There is no effective way to launch a rescue vessel into the south bay.*

Please refer to Response to Comment 19-12 regarding extending vegetation and sediment management beyond the County Marina. Providing rescue vessel access to the south bay is not within the scope of the LGRP objectives.

Response to Comment 19-16

Raising the levee even 1 foot would impair the South Bay Yacht Club's view and would encroach on our property. Any levee raising should be done on the inboard slope of the levee.

The LGRP Engineer's Report recommends that floodwalls be constructed in reach G on existing levees to avoid encroaching on property adjacent to the levee. Visual impacts resulting from the Proposed Project at the South Bay Yacht Club would be less than significant. Raising the height of the levee would alter existing views of the project site from the first floor of the yacht club. However, existing views are of low to average visual quality, and impacts on changes of these views would be considered less than significant. Existing foreground views include the levee bank immediately in front of the yacht club, which is covered with annual grasses and weeds; a chain-link-fenced drydock area containing vehicles and boats; boat masts; and the tops of the marsh reeds. Existing middleground views are of 2 capped landfills, associated landfill buildings and structures, and telephone lines that run parallel to the levee and intercept views of the slough and the mountains in the background. Because of the existing site elements that degrade views of the slough and mountains beyond (i.e., telephone lines, fenced drydock, landfills), and resulting low to average visual quality, changes in views from implementation of the Proposed Project would not significantly affect visual quality at this site. Impacts on views of the project area from the South Bay Yacht Club would be less than significant.

Response to Comment 19-17

Raising levees on the outboard side may not always be practical.

In general, levees would be raised on the outboard slope in areas with adequate ROW. An alternate construction method may be needed in some areas.

Response to Comment 19-18

The comment expresses the commenter's opinion that a direct channel out through the salt marshes should be considered in the Draft EIR. Concern regarding the use of salt ponds to store floodflows is expressed.

Please refer to Responses to Comments 12-37, 16-4, and 17-8, regarding effects on Cargill operations, to 20-8 for more detailed discussion regarding a bypass channel, and 12-37 regarding the integrity of the salt pond levees.

Response to Comment 19-19

The South Bay Yacht Club stands ready to assist in any way that we can help to achieve a meaningful result from this project. This project, in our opinion, falls short of the expected goal, just as the previous projects did.

The District appreciates the commenter's offer for help on this important flood protection project. Your opinion regarding the merits of the Proposed Project is acknowledged.

Comment Letter 20—Robert W. Gross, Ph.D. (October 10, 2001)

Response to Comment 20-1

The comment indicates that the property damage loss flooding from the lower Guadalupe River was understated in the public hearing. The potential economic loss should be reevaluated.

The District acknowledges the commenter's opinion that property damage loss of $500 million was understated during the public hearing. This statement was intended to convey the substantial loss that would result from flooding in areas adjacent to the lower Guadalupe River.

Response to Comment 20-2

Clarification is needed in reference to wildlife and habitat areas. New aquatic vegetation is not indigenous because of freshwater flows from wastewater treatment plants. This has changed the river environment, hydrology, habitat, vegetation, shorebird feeding, etc. All have been seriously affected by the neglect of routine maintenance, and siltation is a result—not a cause.

The District acknowledges that habitat conditions on the lower Guadalupe River may be affected by increased freshwater flows from wastewater treatment plant discharge. The Final EIR presents an analysis of the impacts on existing river conditions from the Proposed Project assuming the conditions that existed during the time the NOP was circulated for public review.

Response to Comment 20-3

All permitting agencies/parties to this EIR should be required to be at all public hearings.

Neither CEQA nor other state or federal laws mandate permitting agencies or other parties to the EIR to attend public hearings. All permitting agencies were invited to the public hearing.

Response to Comment 20-4

Why not put a temporary bypass bridge at the SR 237 bridge around the construction area? If not, this area will be a transportation disaster.

The Final EIR acknowledges that traffic delays during construction of the SR 237 bridge would be a significant and unavoidable impact because of the likely traffic delays that would occur with even the best traffic control plan. A temporary bypass bridge at this location would probably not be feasible because of cost and bridge approach constraints. The bridge construction approach will need to be coordinated, reviewed and approved by Caltrans and would need to be constructed as quickly as possible to minimize the period for traffic delays.

Response to Comment 20-5

There is a serious difference of opinion on future floodflows during a major storm and the control of pump stations upstream of the UPRR. The public has absolutely no faith or trust in the proposed pumping controls during peak flows by a government agency.

The LGRP will accommodate for interior drainage from the City of San Jose and Santa Clara.

Response to Comment 20-6

Pumps would be placed in old salt ponds after flooding, but what provisions were being made for additional pumps in the community of Alviso?

Based on the Proposed Project hydraulics analysis, which assumes implementation of the Baylands Mitigation Measure, no additional pumping in Alviso would be needed from Guadalupe River-induced flooding.

Response to Comment 20-7

What discussions have occurred with the salt company about using their salt evaporators as a floodplain? This would introduce foreign waters and cause damages. The new channel would provide protection to salt ponds, reestablish the hydrology in this region, and improve environmental conditions.

The District is currently negotiating an agreement with Cargill for implementation of the Baylands Mitigation Measure in a manner that would meet the needs of both the District (flood protection) and Cargill (continued salt pond operation). On the basis of discussions that the District has had with Cargill and the resources agencies currently negotiating acquisition of the salt ponds from Cargill, the agreement to use the salt ponds for flood storage purposes is acceptable to these resource agencies and will be implemented, regardless of who owns the ponds.

Please refer to Response to Comment 20-9 below regarding the feasibility of the new Channel alternative.

Response to Comment 20-8

I have serious questions about construction of a new channel from UPRR to San Francisco Bay. How could District staff and the consultants evaluate the proposal when not 1 person took the time individually to discuss the proposal in detail with the author of the proposal? Where is the support or participation from other agencies for financial support? What discussions were made with the salt company and impacts to their product? It is clear that the new channel concept is not understood by the participants of this draft report. Temporary and costly fixes are not the answer.

Construction of a new channel from UPRR to San Francisco Bay was evaluated based on public comments and a written proposal received by the District from the proposal's author. As described in section 4 of the LGRP Engineer's Report, the new channel could cost more than $65 million, but would provide only nominal hydraulic benefits. It would not preclude or even lessen the need for flood protection improvements upstream of the UPRR bridge. Because of significant marsh accretion rates, long-term maintenance of the channel would be required, at high cost, to remove approximately 50,000 centimeters (cm) (19,685 inches) of deposited sediments from the channel each year. Because of the high capital and operations and maintenance costs associated with this alternative, it was not recommended for implementation.

Financial support and participation from other agencies for construction of a new channel was not solicited, because acquiring funding and completing cost sharing agreements with other agencies and conducting environmental review necessary for this proposal would not be possible within the time frame available for the LGRP.

Comment Letter 21—Yolanda B. Gross (October 10, 2001)

Response to Comment 21-1

I support comments made by Mr. Bob Douglas, Mr. Russ Robinson, and Dr. Robert Gross.

The commenter's support of the comments from these individuals is acknowledged. Please refer to the responses to comment letters 17, 18, 19, and 20.

Response to Comment 21-2

I support Alternative 4, page 2-23. This alternative is necessary not only for the community of Alviso (reach G) but also for the other reaches discussed in this EIR.

Alternative 4, the Channel Bypass Alternative, would involve increasing the capacity of LGRP reaches A–G by constructing 2 bypass culverts to convey the design floodflow of 481 cms (17,000 cfs). Alternative 4 would include

- increasing the height of levees and performing some channel excavation in reach A,
- constructing 2 new bypass box culverts entirely within the confines of the existing east and west lower Guadalupe River levees,
- improving maintenance access roads and accommodating future recreation trails on levees, and
- moderately to aggressively managing sediment and vegetation in reaches A–G.

Alternative 4 would provide the same level of flood protection to San Jose and Santa Clara as the Proposed Project. Alternative 4 was selected for evaluation in the EIR because it would meet some of the project objectives; however, it was not selected as the Proposed Project in the Final EIR because of the substantially greater cost and complexity of implementing this type of bypass project, and because it was not determined to be the environmentally superior alternative. As compared with the other alternatives considered, Alternative 4 would result in the most impacts on biological and cultural resources, as well as the greatest construction-related impacts (e.g., noise, reduced air quality, traffic congestion); in addition, Alternative 4 could not be constructed in the time period needed to meet the District's LCA with the Corps.

Response to Comment 21-3

Alternatives 2 and 3 are temporary, interim solutions to flooding. The comment indicates that the Coyote Creek project is an example of proper flood protection that has benefited the community of Alviso.

Alternative 2 is the Proposed Project. Alternative 3, the Channel Bank Modification Alternative, would include excavation of the inboard toe of the existing levees and construction of a vertical to near-vertical channel wall with an apron at the resulting channel bench in reaches D–G, as well as construction of a channel wall extension up to 1 meter (3.3 feet) high above the top of the levee in reaches D–G.

The Proposed Project and Alternative 3 would both provide the same level of flood protection to San Jose and Santa Clara as Alternative 4.

The commenter's opinion regarding LGRP Alternatives 2 and 3 is acknowledged. The District would like to clarify that the LGRP is similar to the Coyote Creek project in terms of project elements, and neither project is intended as an interim solution to flood protection.

Comment Letter 22—Libby Lucas (October 11, 2001)

Response to Comment 22-1

The comment states that the Draft EIR on page S-2 does not accurately represent the watershed of the Guadalupe River.

The Final EIR correctly states that the Guadalupe River begins at the confluence of Alamitos Creek and Guadalupe Creek. However, the Guadalupe River watershed encompasses a much larger area, as illustrated in figure S-1. The area drained by the Gudalupe River includes creeks upstream of the "start" of the Guadalupe River such as Guadalupe Creek, Arroyo Calero, and Alamitos Creek, as shown in figure S-1.

The LGRP project area does not include the entire watershed of the Guadalupe River. Rather, the LGRP project consists of a 10.5-km (6.5-mile) project area along the lower Guadalupe River between I-880 and the UPRR bridge in the cities of San Jose and Santa Clara.

Response to Comment 22-2

The comment suggests that the Draft EIR describe the physical features of the upper watershed including the topography, elevation, soil conditions and vegetation, habitats, and wildlife of Mount Umunhum and the Sierra Azul.

The watershed upstream of the Guadalupe River would not be affected by the Proposed Project. It is acknowledged that conditions in the upper watershed affect the flood potential downstream, including within the Guadalupe River. However, these conditions are part of the baseline and will not be changed as part of this project. Therefore, no description of the upper watershed, including physical and biological aspects of Mount Umunhum and the Sierra Azul, is needed to evaluate the environmental effects of the Proposed Project.

Response to Comment 22-3

The comment suggests that the Engineer's Report, chapter 4, pages 4–21, Upstream Floodwater Storage Alternative, consider offstream storage in addition to new instream dams and raised old instream dams. The commenter requests that a technical workshop be held to consider offstream storage options.

As described on page 2-6 of the Final EIR, the Upper Guadalupe River Project Engineer's Report and the Final EIR/EIS for the Upper Guadalupe River Flood

Control Project considered the feasibility of providing offstream storage options upstream of the LGRP. As described in these reports, such options were found to be infeasible and were thus eliminated from further consideration in the Final EIR.

A technical workshop was held on October 19, 2001 (i.e., 1 week after the commenter's letter) in Alviso to discuss potential offstream storage alternatives, and the commenter attended the workshop.

Response to Comment 22-4

In the public hearing, there was a discrepancy between the presentation by the consultants and in the Engineer's Report figures in the design discharge cfs. In table 5, page 13 of appendix B of the Engineer's Report, it is stated as 20,000 cfs downstream of Tasman Drive, but at the public hearing it was stated as 17,000 cfs. Please clarify this and indicate whether the appendix F profiles on sheets 34–38 are for 17,000 cfs or 20,000 cfs.

Appendix B of the Engineer's Report is a preliminary engineering evaluation of the existing channel capacity. This preliminary evaluation was used to help formulate the design of the Proposed Project. The Proposed Project is designed to accommodate the LCA design flow, estimated at the USGS gage near St. John Street to reach a peak of 481 cms (17,000 cfs) (figure 3-6 of the Final EIR). The LCA design flow does not include local runoff that flows into the river downstream of the gage via gravity or pump systems. In the initial planning stages, channel modifications that would accommodate both the peak LCA flow and the local runoff for a combined design capacity of 566 cms (20,000 cfs) were discussed (please refer to appendix B of the Engineer's Report).

Appendix F of the Engineer's Report contains the preliminary design drawings for the Proposed Project. The drawings report the design water surface elevation, which is calculated using the LCA design flow of 481 cms (17,000 cfs). Please refer to Master Response B in chapter 3 for additional explanation.

Response to Comment 22-5

The comment inquires whether imported water from San Luis Reservoir and the South Bay Aqueduct have been incorporated into the Corps' 1970s model.

The Proposed Project is designed to convey the LCA floodflow (i.e., 481 cms [17,000 cfs]). Incorporating imported water into the Corps' runoff hydrograph model would not change the design flow. Although the imported water has resulted in an increased water table elevation and possibly an increased base flow of the tributaries, these factors have little to do with the peak flood flow. The peak flood flow is related more directly to rainfall intensity (which exceeds the infiltration rate of any exposed soils), the impervious areas (which have no infiltration), and travel time of water from the top of the watershed to the floodplain. During very large storm events, runoff from pervious soil surfaces is essentially the same as impervious pavement because the rainfall rate exceeds the infiltration capacity of the soil. When the Corps reevaluated its 1977 hydrology for the Guadalupe River Flood Control Project, it did consider imported water and the potential for changes in the starting water storage at each of the reservoirs. In addition, the Corps re-evaluated their assumptions regarding rainfall infiltration and runoff. The Corps determined that their previous assumptions were still valid.

Response to Comment 22-6

The comment notes that the historic breakaway points along the Guadalupe River are no longer available to relieve peak events.

Comment noted. These existing conditions are addressed in the Final EIR.

Response to Comment 22-7

The comment suggests that the Draft EIR evaluate the potential for retaining stormwater at Sierra Azul and Mount Umunhum during Pacific storm events for beneficial uses and to lessen related flood damage.

Upstream retention was investigated in the District's EIR/EIS for the Upper Guadalupe River Flood Control Project and was found infeasible, as discussed on page 2-6 of the Final EIR.

Response to Comment 22-8

The comment makes recommendations for dispersal of retained upstream waters.

Please refer to Response to Comment 22-7.

Response to Comment 22-9

The comment states that, downstream of El Camino Real, all efforts should be made to slow runoff to the mainstem Guadalupe River until the storm surge flows have passed through downtown. The comment suggests ways in which this could be accomplished.

Depending on the storm event, the direction and rate of movement of flows, and the rainfall volumes, it is possible for the local runoff peak to be coincident with the Guadalupe River peak, resulting in a flow of greater than 481 cms (17,000 cfs) but less than 566 cms (20,000 cfs) (481 cms [17,000 cfs] plus maximum pump-in rate). However, because the local drainage is at the downstream end of the watershed and closer to the Bay, it is very likely that the peak local discharges would occur before the river's peak. As a result, much of the local drainage would need to be pumped into the river prior to the flood, and a large area of local storage would not be necessary. Under existing conditions, the roads, the stormwater infrastructure, and parking lots provide a large volume of temporary storage. Rather than creating additional storage with sunken gardens or other methods, it may be advantageous to increase the capacity of the local stormwater infrastructure to get water into the river earlier than under existing conditions.

The local drainage facilities are owned and operated by the Cities of San Jose and Santa Clara and the County. EIRs were prepared for their construction and operation. Therefore, the operation of these facilities is not required to be addressed in this EIR. Please refer to Response to Comment 22-4 for further discussion of the LCA design flood flow and development of the LGRP.

Response to Comment 22-10

The comment suggests that tributary outfalls to the mainstem Guadalupe River be of a chevron design and that the downtown storm drainage system be re-reviewed.

There are no tributaries within the project area, although there are numerous storm drain outfalls. During large flow events, the gravity drainage systems do not operate because the water in the river keeps flap gates closed; therefore, there is not a strong discharge of water perpendicular to the river's main flow. The pump stations have adequate hydraulic capacity to discharge regardless of the flow in the river, and therefore are not obstructed by discharges that are perpendicular to the river's flow. Local drainage facilities are owned and operated by the Cities of San Jose and Santa Clara, and the County. The District has determined that the Proposed Project can accommodate the output of these pump stations and outfalls during the peak design event.

Response to Comment 22-11

The comment expresses doubt about the ability of the Proposed Project to achieve the stated goals.

An extensive screening analysis was completed to arrive at the Proposed Project, which is the most cost-effective, least environmentally damaging project that can be implemented to meet project objectives within the constraints of schedule, ROW, financial, and impacts).

The Engineers Report describes all of the assumptions that went into the design and evaluation of the LGRP. As described in that report, it is common practice to assume a 10-year tidal condition when planning a flood protection project. It is entirely possible that a greater tide will occur, such as under El Niño or other weather patterns that cause a sustained low pressure zone. In addition, a storm may occur that has a different hydrograph than the design hydrograph, resulting in a flood that exceeds the LGRP's design capacity.

Urban encroachment and floodplain development has already limited the ability of the District to purchase additional ROW that could allow development of a project that provides a greater level of protection.

Under existing conditions, estuarine sediments are transported into and deposited in reaches G and F; the LGRP will not alter these estuarine processes. Based on water quality monitoring, the salt water and estuarine sediments are not transported upstream as far as Trimble Road or Montague Road, although the tide affects the stage of the river in these areas.

Please refer to Master Response C and D in chapter 3 for a more detailed discussion of setback levee alternatives and the adequacy of the alternatives evaluated in this EIR, respectively.

Response to Comment 22-12

The comment expresses concerns about potential environmental impacts, particularly on fish and aquatic organisms, of flooding and pumping of the Cargill ponds.

The District agrees that under the Proposed Project the volume of floodwaters, and therefore number of fish, directed to the salt ponds west of Alviso Slough would increase. As shown in table 3-5 of the Final EIR, the LGRP would result in increased flood volumes (approximately 14% greater) entering the salt ponds to the west of Alviso Slough. However, the Proposed Project will contain much more floodwater within the lower Guadalupe River channel, thus reducing potential salmonid stranding in the streets and elsewhere. Under existing conditions, lower Guadalupe River floodflows would overtop the levees and spill into the city of San Jose, flow down North First Street to the community of Alviso, New Chicago Marsh, and the salt ponds east of Alviso Slough. The amount of floodwater spilling into the streets and/or the salt ponds under existing conditions is not materially different from the amount of floodwater spilling into the ponds under the Proposed Project. Therefore, the increased potential stranding of fish in the ponds under the Proposed Project is offset by the decreased potential stranding of fish elsewhere that occurs under existing conditions.

Potential impacts on fish and aquatic organisms associated with implementation of the Baylands Mitigation Measure are addressed on pages 3G-20 and 3G-21 of the Final EIR. These impacts are anticipated to be minimal because the ponds would flood infrequently and for short durations. The frequency of flooding in the ponds would be similar to existing conditions; any fish that are diverted into the ponds would have the same opportunity to escape to Alviso and Guadalupe Sloughs as under existing conditions. The use of screened pumps is in accordance with NMFS and DFG guidelines. Please refer to Master Response E in chapter 3 and to Responses to Comments 17-8 and 17-16.

Response to Comment 22-13

The comment suggests that storm drains be constructed that exit to the bay for the industrial development between U.S. 101 and SR 237, and the Coyote and Guadalupe Rivers.

Management of local drainage from the area bounded by U.S. 101 and SR 237 and the Guadalupe River and Coyote Creek is the responsibility of the City of San Jose, not the District. The purpose of the LGRP is to convey Guadalupe River flows to the Bay. Please refer to Master Response D in chapter 3 for a more detailed discussion of the adequacy of the alternatives evaluated in the Final EIR. Please refer to Response to Comment 22-11 for more discussion of the operations of the storm drainage system.

Response to Comment 22-14

The comment expresses concern regarding impacts of groundwater pumping at 18 pumping stations in the County.

These pumping stations are part of the baseline conditions evaluated in the Final EIR. Installation of these pumping stations, if it occurred after 1970, has been subject to separate CEQA review by either the County or the applicable municipality. Modification of these pumping stations is not part of the Proposed Project and is therefore not evaluated in the Final EIR. Water quality data related to baseline groundwater pumping impacts on the Guadalupe River quality is not available. Much of the influence on Guadalupe River temperature is associated with the amount of SRA cover on the river although there are potentially other unknown contributors to elevated water temperatures in the Guadalupe River system. Please refer to Response to Comments 12-32 and 12-33.

Response to Comment 22-15

The comment states that lands along the Guadalupe River levee with mandated public access should be identified.

The comment may be directed to the State Lands Commission or the Parks and Recreation Departments of the Cities of San Jose and Santa Clara to address the feasibility of providing handicap accessible parking spaces for public use. Public access areas are identified for the lower Guadalupe River project area on pages 3I-1 through 3I-3. The Proposed Project would accommodate future recreation trail development that is sponsored by the appropriate local government jurisdiction.

Response to Comment 22-16

The comment states that the Offstream Storage Basin alternative on p. 2-7 is deficient.

As described on page 2-7 of the Final EIR, the Offstream Storage Basin alternative was analyzed and found to be infeasible. Please refer to Response to Comment 5-2.

Response to Comment 22-17

The comment questions the applicability of data in tables 3-1 and 3-3 because they include years during which IBM conducted pumping activities, and these data do not correspond to those used by the Corps for the 1970s hydrology study.

The data presented in table 3-1 were collected at precipitation gage stations; therefore, they were not influenced by groundwater pumping activities. The data in table 3-3 differ from those used by Corps in the 1970s because they include measurements during the 1980s and 1990s; therefore, the table 3-3 data are more current. Inclusion of years during which IBM and Fairchild conducted groundwater pumping activities has an insignificant effect on the data presented in table 3-3.

Response to Comment 22-18

The comment states that impacts on steelhead and salmon are inadequately assessed. The comment makes 3 points. The comment states that (1) the EIR does not accurately portray the geomorphic conditions that exist for steelhead and Chinook in the project area, specifically the reach from Montague to Trimble (reach C); (2) current channel maintenance activities are affecting migrating salmon; and (3) in 1986, 260 redds were noted in the airport reach. The comment requests information regarding current salmon runs.

Impacts on Chinook salmon and steelhead are adequately addressed. The Final EIR discloses the current available information on the use of the Guadalupe River by these species by relying on information presented in published and unpublished reports, and field surveys. The Final EIR mentions that reach C contains "most of the SRA cover in the lower Guadalupe River" (see page 3G-9 under "Shaded Riverine Aquatic Cover"). Stream segments with high amounts of overhead SRA cover typically have lower stream temperatures, higher instream cover (e.g., undercut banks, instream woody material), and habitat complexity. Populations of anadromous salmonids, including Chinook salmon and steelhead, are positively correlated with higher levels of habitat complexity associated with overhead and instream SRA cover. The Final EIR recognizes the importance of the LGRP area to Chinook salmon and steelhead, evaluates impacts of the Proposed Project on these species and their habitat, and recommends appropriate measures to avoid, minimize, and compensate for those impacts.

The Final EIR discloses the existing factors that affect the movement of anadromous salmonids in the Guadalupe River system. These factors are largely the result of constructed features (e.g., the Alamitos drop structure) that, when unladdered, blocked the migration of Chinook salmon and steelhead. Current channel maintenance activities are addressed under the No-Project Alternative and in a separate environmental document prepared by the District (Santa Clara Valley Water District 2000). The Final EIR assumes that relatively minor channel maintenance currently occurs and is authorized by existing permits.

The Final EIR discloses that the LGRP area provides spawning habitat for Chinook salmon. Furthermore, the Final EIR incorporates measures to avoid, minimize, and compensate for impacts on Chinook salmon spawning habitat, and spawning adult Chinook salmon, associated with construction and operation of the proposed LGRP. Chinook salmon population studies to determine the escapement rates in the Guadalupe River have been conducted only recently and infrequently and have not been conducted for a sufficient length of time to accurately determine average annual run size. Preliminary analysis of trapping of adult Chinook salmon by the District in 1997–1999 indicates that escapement in the Guadalupe River currently ranges from 100 to a few hundred adults.

Response to Comment 22-19

The comment suggests that impacts on western pond turtles in reach A are inadequately assessed.

Pond turtles are not known to breed within the Proposed Project area, including reach A (see page 3F-14). On page 3F-15 of the Final EIR, it is acknowledged that, despite poor habitat suitability, pond turtles may migrate into the project area. The District would require pre-construction surveys to ensure that no pond turtles occur in the construction area that could be injured or killed. Implementing Mitigation Measure V-1, "Replace or Compensate for Loss of Riparian and Wetland Habitat," which also includes the restoration of ruderal habitats disturbed during construction, would minimize effects on southwestern pond turtles. Mitigation Measure W-2, "Provide an On-Site Biologist during Construction Phase," has been added to the Final EIR; this mitigation measure would also serve to minimize effects on southwestern pond turtles and confirm that they do not occur in the LGRP area. The LGRP has been designed to minimize permanent impacts (e.g., access ramps) within areas that could provide poor-quality terrestrial habitats for this species. The majority of construction-related impacts would be located on or at the toe of the existing levees, and these areas would be vegetated following construction. No further mitigation is proposed because the project area currently provides poor-quality habitat for this species and limited mitigation opportunities are available in the project area. Therefore, potential impacts on pond turtles are considered less than significant.

Response to Comment 22-20

Wetlands impacts and mitigation should be based on linear feet, not acres, of wetlands lost.

Wetlands and other waters of the United States were delineated according to the Corps' wetland delineation manual; this delineation, including the use of acres as the measurement unit, was verified and approved by the Corps. Because of the fragmented nature and irregular shapes of wetland and riparian habitat patches in the project area, an estimate of linear feet of habitat would be difficult to measure. Readers can get a sense of the distribution of impacts in the project area from the figures in appendix G. The Proposed Project also recommends a near-continuous buffer area adjacent to the low-flow channel that would improve wetland conditions in these areas.

Response to Comment 22-21

The comment suggests that the statement on pages 3G-8 and 3G-9 that "temperatures are lower downstream of the Guadalupe River–Los Gatos Creek confluence and rarely exceed the lethal threshold" contradicts values for Chinook salmon pre-spawning in figure 3-22.

The statement on pages 3G-8 and 3G-9 is correct. Please note that the statement refers to temperatures downstream of this confluence, not temperatures at the confluence. According to figure 3-22, water temperatures at the Guadalupe River–Los Gatos Creek confluence are sub-optimal 75% of the time (and never lethal). At the next station below the confluence (i.e., I-880), water temperatures are optimal 5% of the time, sub-optimal 95% of the time, and never lethal.

Response to Comment 22-22

The comment questions the viability of mowing cordgrass and states that existing marsh conditions in the baylands and Cargill ponds are degraded and need a *restoration plan. The comment also states that the imperviousness of the present marsh is a flood hazard.*

The Final EIR and LGRP Engineer's Report do not propose mowing cordgrass. A restoration plan for the Cargill ponds would improve conservation of the area. However, because restoration of the baylands is not within the scope of the Proposed Project, a restoration plan for these areas is not included in the Final EIR. Please refer also to Response to Comment 1-14 and 6-10 for a discussion of the baylands restoration. Regarding the current imperviousness of the marsh area, the Proposed Project would reduce this existing flood hazard.

Response to Comment 22-23

The comment requests that the trail along the levee within the project area be continuous.

The County Trails and Pathways Plan shows the levees of the lower Guadalupe River as planned future trails. The levees are currently used for recreation purposes, but are not formally designated as trails by the Cities of San Jose or Santa Clara, or by the County. This plan is acknowledged in the first paragraph under "Trails and Pathways" on page 3I-1, with the understanding that the levees are under District jurisdiction and that the District has discretion over how they are used for recreation purposes. The LGRP maintenance access roads were designed to provide continuous access throughout the project area and past every bridge crossing and would accommodate and facilitate future trail development.

Comment Letter 23—Libby Lucas (October 21, 2001)

Response to Comment 23-1

The comment mentions a visit to the project area and graphs of floodflows in the technical review for SR 237.

Comment noted.

Response to Comment 23-2

The comment proposes acquisition of Pond A8 and the reestablishment of connectivity between Guadalupe Slough and the Guadalupe River.

As the commenter notes and as discussed in detail in the Final EIR in appendix E, federally threatened western snowy plovers breed in Pond A8D. Snowy plovers have nested recently in the pond, particularly in the southern and western portions of the pond. Reestablishing the historic hydrologic connection between the Guadalupe River and Guadalupe Slough could adversely affect the nesting colony of snowy plovers in Pond A8D through direct impacts and increases in the frequency and duration of flooding. Such restoration would likely conflict with the proposed Baylands Mitigation Measure (see pages 3A-17 and 3A-18), which maintains snowy plover habitat except in high flood conditions. Mitigation Measure HH-3 addresses this adverse effect on snowy plovers by pumping floodwaters from Pond A8D (and others) to a lower level than would be expected in this pond under existing conditions. Floodwaters would also be pumped out of the pond before the plover breeding season.

During major flood events, the Proposed Project would rely on the storage capacity of the Cargill salt ponds, including Pond A8D. Establishing a historic hydrologic connection through this pond would compromise this storage capacity and could put Alviso at increased risk of flooding. Construction activities in Pond A8 are outside of the scope of the Proposed Project.

Response to Comment 23-3

The comment suggests modifying the mitigation plan at Pond A4 so that the pond serves as a flood basin for San Tomas Creek and Calabazas Creek.

This comment is on the details of the proposed Pond A4 restoration project, not the Proposed Project or the Draft EIR. The commenter's opinion about this separate but related restoration project is acknowledged.

Response to Comment 23-4

The comment suggests expanding the floodplain in the triangular area bordered by the Guadalupe River, Gold Street, and SR 237.

Setback levees have been considered as part of the alternatives screening process and have been determined to be infeasible. Please refer to Response to Comment 2-1 and to Master Response C in chapter 3.

Response to Comment 23-5

The comment suggests that extreme measures and expenditures are necessary to address flooding in the project area.

The Proposed Project is a feasible flood protection solution that would meet the project objectives.

Comment Letter 24—James T. Harper (October 8, 2001)

Response to Comment 24-1

An increase in levee height and floodwalls would create increased local flooding without concurrent improvements to local drainage, meaning economic hardship for adjacent property owners.

Please refer to Master Response B.

Response to Comment 24-2

What coordination would be made with the City to ensure that local drainage improvements are provided concurrent with the LGRP to avoid additional flooding of adjacent properties?

Please refer to Response to Comment 12-32 and 12-33.

Comment Letter 25—Santa Clara County Streams for Tomorrow, Keith R. Anderson, Environmental Advocate (October 5, 2001)

Response to Comment 25-1

The environmental commitment of the Construction-Area Fish Management Program—to maintain sufficient flow through culverts, pumps, or siphons to provide unimpeded passage during construction—should explicitly apply to juvenile steelhead.

The EIR authors concur. The text of the Final EIR has been revised on page 2-33 to specifically identify both "juvenile chinook salmon *and* steelhead."

Response to Comment 25-2

Diversion facilities employing standard water pumps do not provide the intended "unimpeded passage" of juvenile salmonids (smolt). The statement should be modified to exclude the use of pumps during the period of downstream migration by juvenile salmonids.

As described in the "Construction-Area Fish Management Program" section on page 2-32 of the Final EIR, sufficient flow during construction will be maintained through bypass channels, culverts, or siphons employing gravity flow to allow consistent streamflow in the downstream segments and provide unimpeded passage of juvenile chinook salmon and steelhead during construction. Any pumps used for flow diversion will be screened according to NMFS's screening guidelines (see Response to Comment 1-3). Pumping would only occur when other preferred methods (e.g., bypass channels, culverts, or siphons) were determined to be impractical. The use of pumps would be restricted to the June 15 to September 1 period. Adequate fish passage conditions would be met by maintaining contiguous flows, avoiding the creation of vertical drops in excess of 6 inches, and maintaining suitable water velocities (i.e., 8 fps or less) and water depths (minimum of 1 foot).

Response to Comment 25-3

The Construction-Area Fish Management Program includes the environmental commitment to operate a fish trap in June if construction may impede juvenile salmonids from migrating downstream. Trapping and relocating activities can cause stress on salmonids and increase the potential for direct and indirect mortality. Therefore, the District should delete the June trapping commitment *and, as a substitute, commit to limiting instream construction to July 1–October 15 and that portion of June when stream-monitoring criteria document the absence of out-migrating juvenile salmon and steelhead.*

The May 1–October 15 construction schedule was selected to provide a reasonable time frame in which to construct the project while at the same time avoiding or minimizing impacts on sensitive fish species, including steelhead and Chinook salmon. A shorter construction window than that proposed could result in delaying completion of the project, thereby extending construction, and potential impacts, for up to 1 or more years. The timing of construction proposed by the District balances the need for maintaining an appropriate construction schedule with the needs of migrating fish. The Construction-Area Fish Management Program in the Final EIR has been revised and does not include trapping as a method for allowing downstream migration of juvenile salmonids. Please see Response to Comment 25-2.

Response to Comment 25-4

No alternative stream-monitoring criteria for May and June are presented in the event that ongoing smolt trapping is not in operation. The Final EIR must identify the alternative criteria or approaches that would be employed to trigger the various smolt impact avoidance measures in the event that the referenced ongoing fish trapping is not operating.

Ongoing fish monitoring is an environmental commitment made by the Corps and the District in the EIR/EIS for the Guadalupe River Flood Control Project. These criteria and processes were developed in consultation with DFG, the U.S. Fish and Wildlife Service (USFWS), and NMFS. The District has certified the EIR and the federal Record of Decision for the EIS has been signed. It is anticipated that the stream monitoring criteria and process to determine the presence of out-migrating juvenile salmonids will be in place and operational; therefore, alternative criteria and methods need not be developed.

Response to Comment 25-5

The District should consider adopting the SMP's anadromous salmonid migration and spawning impact avoidance BMP measure, which restricts instream work to June 15–October 15.

The more restrictive salmonid migration and spawning impact avoidance measure in the SMP is necessary because activities associated with the SMP are long-term, annual events that have the potential to have adverse effects on Chinook salmon and steelhead cohorts for many years to come. In contrast, construction of the LGRP would only occur over 1 or 2 summers.

Furthermore, the May 1-October 15 construction schedule was selected to provide a reasonable time frame within which to construct the project while avoiding or minimizing impacts on sensitive fish species, including steelhead and Chinook salmon. A shorter construction window than that proposed could result in delaying completion of the project, thereby extending construction, and potential impacts, for up to 1 or more years. The timing of construction proposed by the District balances the need to maintain an appropriate construction schedule with the needs of migrating fish by avoiding primary migration periods.

Response to Comment 25-6

The Construction-Area Fish Management Program as presented in the Draft EIR is inadequate and incomplete. No explanation or justification is provided as to why 25 salmon must be counted or captured at some unidentified downstream site before upstream passage is provided through or around the construction area. Delaying salmon migration by holding them in the river's marginal September–October habitat conditions may adversely affect the health of the fish and their spawn. If streamflow conditions are sufficient to allow adult salmon to reach cofferdams at the downstream end of construction sites, then unimpeded passage must be provided.

Uninterrupted fish passage for migrating adult Chinook salmon would be provided after September 1 at construction sites where cofferdams and stream dewatering are necessary (please refer to Response to Comment 1-4). Before September 1, the District will provide fish passage for adults around construction sites only if substantial numbers of adult Chinook salmon are found to be blocked by in-channel construction activities. Twenty-five fish were chosen as the threshold to initiate passage around the construction site. This 25-fish threshold was developed for the Corps' Downtown Guadalupe River Project by a collaborative process consisting of representatives from the Corps, the District, NMFS, USFWS, and DFG. It is the professional opinion of the EIR authors that any impacts that may occur by delaying migration or increasing mortality among fewer than 25 adult fish would not have substantial adverse effects on Chinook salmon production in the Guadalupe River in any given year. Furthermore, because construction would occur over only 1 or 2 summers, any potential impacts on fish production that may result from delays in migration would not be expected to threaten the continued existence of Chinook salmon in the Guadalupe River. This conclusion was reached after considering that any impacts on migration (and possibly fish production) would be limited to only a proportion of the total annual run in the Guadalupe River in any given year, and that potential impacts only would occur over 1 or 2 years.

Response to Comment 25-7

The Final EIR should include a commitment that rock weir construction in reach A would meet NMFS criteria for anadromous salmonid passage.

NMFS has recently adopted guidelines for salmonid passage at stream crossings that apply to all roads, trails, and railroads within the range of anadromous salmonids in California (National Marine Fisheries Service 2001). However, NMFS does not have criteria for salmonid passage related to small instream structures, such as rock weirs. The rock weirs most closely resemble a narrow ford, with the submerged crest only being 1 meter (3.3 feet) wide. The rock weirs are designed to provide a depth of approximately 0.15 meter (0.5 foot) at approximately 0.28 cms (10 cfs). Because the weirs would be constructed from large rock, there would be the ability to fine-tune the structures to provide passage at lower flows if needed. The District will consult with NMFS in the design and construction of the proposed rock weirs.

Response to Comment 25-8

The commenter seeks confirmation that the only LGRP activities in the low-flow channel would be construction of the rock weirs near the I-880 bridge in reach A and construction of a new SR 237 eastbound bridge.

During preparation of the Draft EIR, only preliminary engineering designs were available. Initially it was thought that only in-channel work would be required at SR 237 and in reach A near I-880. However, at the current state of the design, additional rock weirs would be required at the U.S. 101, Montague Expressway, and Trimble Road bridges to prevent channel degradation during the design flow. These structures would be located under the bridges and within the bridge transition zones, which are to be kept clear of vegetation and sediment to maintain design capacity. All of these structures would be designed to provide passage for migrating salmonids. These additional structures would not cause new, previously unidentified impacts on the environment. The project description and the affected resource chapters have been edited to reflect these minor changes in the project.

Response to Comment 25-9

Mitigation Measure F-1 (page 3G-17) provides passive fish-passage connections between the excavated sediment removal sites and the low-flow channel. What assurances can be provided in the Final EIR that the connections will remain functional over time?

This Final EIR includes a Mitigation and Monitoring Plan (MMP) as required by CEQA. Chapter 7 of the Final EIR provides a draft summary of the plan as proposed, pending agency input during the permitting process. As identified in this plan, the District would be required to monitor and annually report to NMFS any actions necessary to maintain functional connections between the excavated sediment removal sites and the low-flow channel. If the passive connections between the sediment removal sites and the low-flow channel become compromised, the District would be able to reestablish those connections by removing the accumulated sediments.

Response to Comment 25-10

What assurances can be provided in the Final EIR that drainage through these passive fish-passage connections during receding flows after storm events would not cause accelerated erosion of the connections and downstream sedimentation in the low-flow channel?

Connecting channels to the sediment removal areas would be designed to reduce the possibility of erosion at the inlet and outlet of the channels. Possible measures to reduce the potential for erosion at the inlets and outlets, other than through design features of the inlets and outlets, include constructing the inlets and outlets so that there is a gradual sloping of the channel at the interfaces of the sediment removal areas and the low-flow channel; and installing erosion control materials such as erosion control matting, or employing other similar materials or techniques to prevent erosion. Because the purpose of the sediment removal areas is to trap sediments that would normally be deposited in the low-flow channel and other downstream areas, any potential increases in downstream sedimentation that may occur from erosion at the inlets and outlets of the sediment removal areas would be expected to be offset by the much larger reduction in sedimentation that is anticipated from operation of the sediment removal areas.

Comment Letter 26—Citizens Committee to Complete the Refuge, Florence M. LaRiviere, Chairwoman (October 11, 2001)

Response to Comment 26-1

What contracts have been made between the District and the salt pond operator regarding flooding of salt ponds? Have permanent flood easements been acquired? How will these management plans influence future restoration of tidal marsh or snowy plover habitat?

The District is currently negotiating an agreement with Cargill for the use of Salt Ponds A8D and A8W for temporary flood storage during the design flood event. The negotiated agreement may or may not include permanent flood easements. On the basis of discussions that the District has had with Cargill and the resources agencies currently negotiating acquisition of the salt ponds from Cargill, the agreement to use the salt ponds for flood storage purposes is acceptable to these resource agencies and will be implemented regardless of who owns the ponds.

The proposed Baylands Mitigation Measure (measures HH-1 through HH-4 in the Final EIR) has been designed to minimize the need for capital improvements to the extent possible. This low-impact approach should be consistent with future plans to restore the baylands to tidal marsh. Implementation of Mitigation Measure HH-3 would reduce LGRP impacts on snowy plover habitat to a less-than-significant level because Pond A8D would be pumped after storm events before the snowy plover nesting season.

Response to Comment 26-2

The Draft EIR states that flooding would occur in Ponds A13, A15, and A17. Have USFWS wildlife biologists studied the impacts this would have on species that use them?

Table 3-4 of the Final EIR shows that flooding in Ponds A13, A15, and A17 would be the same as under existing conditions. No impacts on wildlife are expected in these ponds as a result of the Proposed Project. Please refer to Response to Comment 17-8.

Response to Comment 26-3

Identifying species that may occupy ponds or New Chicago Marsh is useful but serves to increase our anxiety about impacts of future floodflows. Ensuring that adverse impacts would not result from District actions requires intense observation that is sometimes lacking, especially in times of widespread emergencies.

The Final EIR presents a discussion of the possible environmental impacts that could result from implementing the Proposed Project, including potential impacts on special-status wildlife species. The severity of project flooding impacts on wildlife and wildlife habitat is judged against the impacts of the existing flooding condition. The result of the Final EIR analysis has shown that in many cases, implementing the Proposed Project would result in less salt pond flooding or flooding in New Chicago Marsh. Please refer to table 3-4 of the Final EIR. In areas where flooding would be greater under the Proposed Project than under existing conditions, mitigation measures are proposed to reduce impacts to a less-than-significant level. The District would also implement an MMP as required by CEQA. The District also acknowledges the concern that monitoring of salt pond pumping could be less than perfect during a flooding emergency. However, most of the pumping recommended under the Baylands Mitigation Measure in ponds A8W, A5, and A7 would not result in impacts to special status wildlife species because none occur in these areas. In pond A8D, the District will be required by the USFWS to pump this pond until it is dry to avoid impacting the western snowy plover breeding season. This pumping activity would be closely monitored by a qualified biologist in close coordination with USFWS staff to ensure that flood waters in this pond do not affect this species.

Response to Comment 26-4

Project construction, such as raising levees, sometimes is done carelessly and impacts on fringe marshes occur.

The Final EIR has been revised on page 3F-24 to require the presence of a biological monitor at sensitive construction sites to ensure that inadvertent construction impacts do not occur during project construction. Please refer to Response to Comment 5-16.

Response to Comment 26-5

We would appreciate added information regarding the Draft EIR assessment of changes in water depth in New Chicago Marsh and the salt ponds. How would new flooding depths affect the current wildlife populations?

The entire biological resources analysis that was conducted for the Proposed Project in the baylands is presented in appendix E of the Final EIR.

Response to Comment 26-6

We cannot agree with the often repeated phrases "no mitigation needed" and "impact is considered less than significant." It appears that hundreds of acres that are ponds and seasonal wetlands would be essentially turned into flood basins.

The Proposed Project with the Baylands Mitigation Measure has been designed to avoid impacts on sensitive biological resources to the extent practical. In addition, there is a series of environmental commitments in the project designed to avoid and preserve habitat. Because salt ponds would be flooded under existing conditions without the Proposed Project, impacts that would be rightfully assigned to the Proposed Project are considered less than significant unless the hydraulic modeling indicates that it would result in flooding increases. Wildlife impacts from infrequent flooding during a design flood event in Ponds A5, A7, and A8W are generally considered less than significant because these ponds do not support special-status wildlife habitat. Please refer to appendix E of the Final EIR for additional information.

Comment Letter 27—Western Waters Canoe Club, Lawrence M. Johmann, P.E., C.Q.E, C.R.E. (October 12, 2001)

Response to Comment 27-1

The comment states that the Proposed Project would increase the chance of major and/or catastrophic flooding, reduce water quality, and eliminate essential habitat for wild and aquatic life, greatly increase continued maintenance costs, and degrade all designated beneficial uses.

The Proposed Project is designed to increase flood conveyance capacity in the project area by approximately 85 cms (3,000 cfs); therefore, it would reduce the chance of major and/or catastrophic flooding in the project area. All potentially significant impacts on water quality, biological resources, and other resources are adequately assessed and mitigated in the Final EIR.

Response to Comment 27-2

The Draft EIR is totally inadequate to fulfill the requirements of CEQA.

The Final EIR has been prepared in accordance with the requirements of CEQA. The document analyzes the possible adverse impacts that the Proposed Project may have on the surrounding environment, and recommends mitigation measures to avoid or substantially lessen any potential impacts. An EIR is an informational document designed to aid decision makers and inform the public by disclosing the potential environmental effects of a proposed project. The state guidelines for implementing CEQA require an EIR to provide a sufficient amount of information and analysis to allow decision makers to make informed judgments. The information in the EIR represents the best scientific data available at the time the document was prepared. The analyses rely on accepted methods of scientific testing and modeling. All reasonably foreseeable impacts that might be caused by the Proposed Project have been disclosed, and mitigation measures have been designed to reduce these impacts to levels below significance.

Response to Comment 27-3

The comment expresses doubt that a 100-year flood event would produce a flow in the lower Guadalupe River of 17,000 cfs, the same level estimated more than 17 years ago.

In preparing the EIR/EIS for the Downtown Guadalupe River Project, the Corps reviewed the design peak floodflows, taking into consideration the flooding and the land use changes that had occurred since completion of the 1977 hydrology study. The Corps' analysis concluded that the 1977 hydrology study properly reflects future upstream channel improvements and urbanization. The Corps also determined that the flood routings and rainfall loss rates are still valid and properly reflect prevailing conditions. Consequently, the Corps has determined that the design floodflow of 481 cms (17,000 cfs) at St. John Street accurately reflects the peak flow likely to enter the project area from upstream.

Response to Comment 27-4

The Draft EIR references a Peak Flow Frequency Curve for the St. John Street gage station, which shows a 100-year flow of 17,000 cfs at that location. Please explain how the flow levels can remain the same downstream of this gage station with all of the additional runoff and drains dumping water into the river beyond this point.

The EIR authors recognize that stormwater inflows from downstream of the St. John Street gage can occur up to 18,350 (Please refer to appendix J, "Technical Memorandum, Evaluation of Effects of Interior Drainage Flows on LGR Hydraulic Conditions.")

Please refer to Master Response B in chapter 3.

Response to Comment 27-5

The comment suggests that large-scale housing and industrial development should not have been permitted in the Guadalupe River's floodplain next to the levees.

The referenced development is an existing condition and not part of the Proposed Project. Please refer to Response to Comment 15-2.

Response to Comment 27-6

The comment expresses concern about a picture displayed at the project planning meeting held at the Silicon Valley Conference Center on May 3, 2000. The picture depicted flooding in Alviso, which the commenter says was caused by flooding of Coyote Creek, not the Guadalupe River.

This comment regarding the past flooding in Alviso is acknowledged. The intent of displaying the picture was to visually convey the potential damage caused by flooding in the Alviso area.

Response to Comment 27-7

The comment requests clarification regarding the amount of vegetation that would be removed during construction and during postconstruction maintenance.

The Final EIR indicates on page 2-20 that various levels of vegetation management would be required in the LGRP area to ensure conveyance of the design floodflow and preserve the LGRP's "as built" condition. Specific maintenance guidelines are addressed in chapter 6 of the LGRP Engineer's Report. All vegetation impacts from maintenance activities have been disclosed in chapter 3E, "Vegetation."

Response to Comment 27-8

The comment requests an explanation of the relationship of reach A with the Upper, Downtown, and Lower Guadalupe River Projects.

The text on page 2-12 of the Final EIR identifies the portion of reach A that has been previously evaluated in the Downtown and Upper Guadalupe River environmental review processes. These upstream projects have previously considered modification of a portion of reach A for various reasons. Channel modifications and riparian mitigation have been evaluated in this reach, as part of previous projects, generally upstream of Airport Parkway. Once channel improvements for the LGRP in the lower Guadalupe River were proposed and initial hydraulic modeling was completed, it became apparent that all of reach A from I-880 to U.S. 101 needed to be included in the LGRP area. The current improvements under the Proposed Project include levee raising and floodwall construction, aggressive vegetation management, placement of rock weirs downstream of I-880, and bank protection at U.S. 101. These features are being designed to be consistent with existing structures and mitigation planting areas implemented by Caltrans (for the SR 87 widening project) and the Corps (for the Downtown Guadalupe River Project). In addition, the Final EIR recommends planting riparian vegetation between Airport Parkway and the Airport Island bridge and in reach B to mitigate the loss of riparian vegetation resulting from the LGRP.

Response to Comment 27-9

The comment requests clarification of mitigation plantings in reach A.

Mitigation planting between Airport Parkway and U.S. 101 would replace the riparian habitat that would be disturbed by levee construction and maintenance in the project area. Cottonwood (*Populus fremontii*), willow (*Salix* spp.), and other riparian species would be planted along this reach in the low-flow buffer area, which would not be affected by ongoing maintenance activities (i.e., vegetation removal). Proven planting techniques, such as willow stakes (2.5–7.6 cm [1–3 inches] in diameter) and container plants, would be used in this area to ensure a high success rate. Please refer to the revised Mitigation Measure V-1 on page 3E-24 of the Final EIR for a description of mitigation plantings.

Response to Comment 27-10

The comment requests clarification of proposed sediment removal in the channels and the ability of vegetation plantings to withstand increased water velocities during a flood event.

Sedimentation management activities would occur outside of the low-flow channel. They would be restricted to depositional zones such as high gravel bars, remnant channels, and localized areas near bridge over-crossings. Periodic removal of sediment in reaches B–E would be assessed annually by District staff. Managed vegetation could be subsequently removed in alternating strips in various areas, depending on the rate and location of sedimentation (please refer to chapter 6 of the Engineer's Report).

Regarding the potential loss of vegetation as a result of increased water velocities during a flood event, hydraulic modeling indicates that there could be some effect on vegetation in the areas upstream and downstream of bridges and in reach C (see page 3E-33). These effects are not expected to be significant because velocities would not be great enough to cause appreciable vegetation loss.

Under the Proposed Project, the potential for channel erosion and deposition in the lower Guadalupe River would be essentially the same as under existing conditions because sediment removal and vegetation management would not change erosion rates (see pages 3B-7 through 3B-9).

Response to Comment 27-11

The comment questions the proposed installation of rock weirs downstream of the I-880 bridge because they would cause bank erosion.

The proposed rock weirs would be designed to reduce bank erosion. They would direct stream energy away from the banks and create a downstream plunge pool for energy dissipation. In addition, rock weirs were chosen to meet the biological goals of enhancing passage for migrating fish and increasing habitat complexity. Please refer to Response to Comment 25-7.

Response to Comment 27-12

The comment calls for a plan and schedule for replanting a nonproject-related mitigation site in reach C. In addition, it expresses doubt about the Proposed Project's chance of success, citing the mitigation site as an example.

The referenced mitigation site in reach C is not associated with the Proposed Project; it refers to mitigation plantings associated with the 1983 flood control project. These mitigation plantings are currently being evaluated by the District in coordination with permitting agencies as part of the existing riparian habitat affected by the project; any loss or damage to these plantings is fully mitigated through project design. Furthermore, maintenance and vegetation management plans associated with the Proposed Project are based on the plans and specifications for previous mitigation plantings and are designed to avoid removing existing mitigation plantings.

Response to Comment 27-13

The comment doubts the workability of the Proposed Project, referring to the downtown project as an example. How would these upstream problems affect the Proposed Project?

The LGRP has been designed to convey the design floodflows. Hydraulic analyses for the LGRP indicate that the Proposed Project would convey flows from upstream projects. Upstream conditions are not expected to adversely affect the LGRP.

Response to Comment 27-14

The comment expresses concern about the adequacy of the Proposed Project to provide flood protection for flood events with peak flows in excess of 481 cms (17,000 cfs).

The Proposed Project is designed to increase flood capacity in the lower Guadalupe River so that it has the ability to convey a flood event with a peak flow of 481 cms (17,000 cfs). This would provide improved flood protection for residents and businesses in San Jose and Santa Clara that are located in the floodplain of the lower Guadalupe River. The Proposed Project will also accommodate for an additional 1,835 cfs of flood inflows from the cities of San Jose and Santa Clara. Ensuring adequate flood conveyance for greater flood events is not an objective of the Proposed Project and therefore is not addressed in the EIR.

Response to Comment 27-15

The comment disagrees with the statement that there is no historic evidence of chinook salmon migrating and spawning in the Guadalupe River.

There is considerable debate over whether chinook salmon were present historically in the Guadalupe River basin. However, this issue has no bearing on the analysis contained within the Final EIR for the LGRP. The Final EIR presents information on the current use of the Guadalupe River by Chinook salmon, which have been documented using the river for migration, spawning, and rearing. The fisheries impact analysis assumes that Chinook salmon use the project area, is focused on both Chinook salmon and steelhead, and recommends appropriate protective and mitigation measures to ensure the continued viability of both Chinook salmon and steelhead.

Response to Comment 27-16

The comment disagrees with the statement that at least some Chinook salmon in the Guadalupe River are hatchery strays.

Because the origin of Chinook salmon in the Guadalupe River is of considerable debate, DFG conducted genetic testing of adult Chinook salmon in 1993 and 1994. The purpose of the study was to determine whether adult Chinook salmon in the Guadalupe River differed genetically from hatchery Chinook salmon populations from the Sacramento River. The results of the genetic analysis have been inconclusive; relatively small sample sizes and genetic marker selection can limit the ability to identify the exact origin of individuals. Results of the analysis of the 1994 spawning Chinook salmon populations in the Guadalupe River show that the genetic origin of 6 of the 29 adult fall-run Chinook salmon could not be identified with any known wild or hatchery population sampled to date in the Central Valley. Two of the 29 showed similarities with Russian River fish. However, the study cautioned that more sampling of Central Valley hatchery populations is needed before it can be concluded that these 6 fish are not hatchery strays. The remaining 21 adults sampled in 1994 could not be differentiated from the Merced River and Feather River hatchery stocks using the methods employed in the analysis.

In addition to genetic analysis, during the past few years, the District's fisheries biologists have recovered coded wire tags identifying some Chinook salmon in the Guadalupe River as Sacramento–San Joaquin River Basin hatchery fish.

Response to Comment 27-17

The comment states that either juvenile or adult salmon occur throughout most of the year in the lower portion of the project area, and that therefore, additional mitigation measures are needed.

Additional protective measures, above and beyond those discussed in the Final EIR, are not needed to adequately protect juvenile and adult Chinook salmon in the Guadalupe River. The commenter is correct in stating that any 1 of the life stages of Chinook salmon may be present in the lower Guadalupe River on any given day of the year (the timing of out-migrating juveniles and returning adults can sometimes overlap). However, by proposing that construction be restricted to the summer low-flow period (May 1–October 15), the District is avoiding the primary migration periods for both juvenile and adult Chinook salmon. Some individuals of juvenile and adult Chinook salmon may be adversely affected by project construction in spite of these protective measures; however, any adverse effects on individual Chinook salmon resulting from project construction would not be expected to cause Chinook salmon populations in the Guadalupe River to drop below self-sustaining levels.

Response to Comment 27-18

The comment states that the proposed instream structures would block small-craft navigation along the river.

Up to 6 rock weirs would be installed in reach A to provide grade control, prevent lateral migration of the low-flow channel and resultant bank scour, and improve fish passage during periods of low flow. With a crest length of about 3 meters (9.8 feet) (perpendicular to flow) and width of about 1 meter (3.3 feet) (in line with the flow), flows typical of early fall and winter, 0.28 cms (10 cfs), would provide about 0.15 meter (6 inches) flow depth across the weir crest. Because the weir structures are designed to be self-healing, there is the opportunity during construction to notch the weirs to make a deeper but narrower overflow crest. It is anticipated that these final design/construction details will be worked out with NMFS and DFG to provide the best possible fish passage conditions.

As stated on page 3I-3, boating opportunities in the project area are limited during low-flow conditions (May–November). Boating may be possible, as stated in the comment letter, at other times during the year with portage necessary around some obstacles. The installation of these weirs would not significantly reduce small-craft navigation in reach A because the depth of water over the weirs would be adequate for shallow draft-water craft, such as canoes or kayaks, during the typical low-flow season. Additionally, the hardened surface would likely provide firmer footing for portage, if necessary, during very low flow conditions.

The legal requirement to maintain navigability (under Section 10 of the Rivers and Harbors Act) applies only to the lowermost reach of the Guadalupe River (up to approximately Tasman Drive), not reach A, as described on page 1-10. Modification to weirs under I-880 is not discussed in this EIR. These features are part of the Guadalupe River Project, which has undergone separate environmental review and permitting processes.

Response to Comment 27-19

The comment recommends restoring the river to a natural meandering channel with a modified floodplain. Flood protection measures should be restricted to set back levees or bypass culvert/pipes (storm sewers). The design and construction costs of these alternative measures should be discussed.

The intent of the Final EIR is to evaluate the effects of the Proposed Project within the context of existing conditions, and to determine whether the Proposed Project would exacerbate effects harmful to the river's natural environment to the degree that the effects are considered significant. While it is desirable to restore the river to a natural meandering channel, this is not feasible in the study area because the land adjacent to the channel has become almost entirely urbanized. Please refer to Master Responses C and D in chapter 3 for a discussion of the alternatives analysis.

The commenter's preference for the bypass culvert alternative (Alternative 4, Channel Bypass) is noted.

Response to Comment 27-20

The comment states that none of the proposed options in the EIR, with the possible exception of the bypass culvert, would satisfy the stated project goals.

As described in chapter 2, a rigorous screening process was applied to all potential alternatives. One of the key criteria in this process was the alternative's ability to meet the project purpose and objectives. It is acknowledged that some of the alternatives in the Final EIR better meet some of the objectives than other alternatives (e.g., Alternative 4 would have less of an environmental impact than Alternatives 2 and 3). However, all 3 action alternatives do meet the stated purpose and objectives of the Proposed Project. Please refer to Master Responses C and D in chapter 3.

Response to Comment 27-21

The comment questions past decisions to build facilities and homes in the Guadalupe River floodplain.

Please refer to Response to Comment 27-5.

Comments Received at the October 2, 2001, Public Hearing

Response to Comment 1 (Bob Douglas, Cargill Salt)

The comment states opposition to the proposed plan to use the salt ponds as a floodwater overflow basin. Cargill is willing to work with the District to identify solutions that protect the residents and businesses of Alviso.

Please refer to Master Response A in chapter 3. As described in the Final EIR, the Cargill salt ponds are subject to flooding under existing conditions based on photographic evidence and calibrated hydraulic models. Implementation of the Proposed Project would increase the volume of floodwater that would inundate the salt ponds, not the frequency with which the salt ponds would flood. The District has proposed installation of a formal weir to prevent an increase in the frequency of flooding and to prevent down-cutting of the levee during a flood. The District is also proposing to pump out additional floodwaters to prevent damage to the levee system that could be caused by deeper depths of inundation. Please refer to the responses to comment letters 16 and 17.

Response to Comment 2 (Bob Douglas)

The comment indicates support for the proposal set forth in the LCA with the Corps. The commenter is willing to consider support of the proposal submitted by Dr. Robert Gross, retired director of the District's area 3, which calls for construction of a channel that flows directly to the bay.

Please refer to Master Response A in chapter 3. The Proposed Project does not include an excavated channel from the mouth of the Guadalupe River to the bay. An extensive screening analysis was done to develop the Proposed Project. Please also refer to Master Responses C and D in chapter 3 and to Response to Comment 20-8.

Response to Comment 3 (Libby Lucas)

The commenter would like to be involved in the hydraulic issues work/study session. The capability of offstream storage upstream of the LGRP area has not been investigated as thoroughly as it should. The District board should look at how stormwater is handled in the downtown area and consider recessing some streets for use as temporary flood diversions, as was done with the breakaways at SR 87 during the flood of 1995.

An extensive screening analysis was done to develop the Proposed Project. This analysis showed that offstream storage was not feasible because of capital costs. Local drainage facilities are owned and operated by the Cities of San Jose and Santa Clara and the County. The operation of these facilities is not required to be addressed in this EIR. Please refer to Response to Comment 22-9.

Response to Comment 4 (Louise McCracken, Alviso Rotary Club)

A comprehensive emergency evacuation plan should be developed for residents of Alviso.

Please refer to Response to Comment 5 below.

Response to Comment 5 (Taher Basma, City of San Jose)

An emergency evacuation plan is available through the City Emergency Operations Department, Office of Emergency Services.

Thank you for identifying the agency responsible for developing and implementing the emergency evacuation plan.

Response to Comment 6 (Robert W. Gross, Ph.D.)

The comment expresses support for a channel that flows straight through to the bay and opposition to City operation of emergency pump stations. The District board should consider using temporary bridges during nonwinter months and installing pumps in the community areas of Alviso.

Please refer to the response to comment letter 20. As described previously, local drainage facilities are owned and operated by the Cities of San Jose and Santa Clara and the County, and their output can be accommodated by the project during a design flood event.

Raising and replacement of the eastbound SR 237 bridge would be coordinated with Caltrans to reduce the impacts on traffic to the maximum extent possible. It may be possible to phase construction to allow a portion of the bridge to remain in use during construction, or to change the approaches to allow use of the westbound bridge for all traffic, possibly with changeable lanes to accommodate commute patterns.

The Proposed Project would reduce the potential for flooding from the Guadalupe River in the community of Alviso. Flooding from New Chicago Marsh, the salt ponds, or Coyote Creek would not be affected by the Proposed Project.

Response to Comment 7 (Robert W. Gross, Ph.D.)

Permitting agencies should be invited to public hearings. The District board should pursue off-site mitigation opportunities with Caltrans and San Francisco International Airport. It should also look at the successes of the Lower Coyote Creek Project as a model for the LGRP.

Please refer to Response to Comment 20-3.

The District has already acquired Pond A4 from Cargill Salt and is in the process of developing a restoration plan to provide off-site mitigation for this and other District projects. The District is interested in participating in regional habitat restoration projects.

Response to Comment 8 (Lurdes Rivera-Murphy)

The commenter discussed tule reed growth in reaches A–G. The District board should expedite work and install new pumps.

The Proposed Project does not include pump systems for flood protection. The District is working diligently to complete the CEQA process and acquire permits to implement the maintenance portions of the project as soon as possible.

Response to Comment 9 (James T. Harper, Realtec Properties)

Increased levee heights without additional drainage improvements would create economic hardships for adjacent property owners. The commenter would like clarification on coordination efforts with the City relative to local drainage improvements.

Please refer to the response to comment letter 24.

Response to Comment 10 (Russ Robinson, South Bay Yacht Club)

Maintenance under the LGRP should go beyond mowing and should include digging 3 or more feet to remove the root mass as proposed in the Draft EIR.

The Proposed Project includes root mass removal as described in the Final EIR in specific locations where it would provide hydraulic benefits and is feasible to remove materials.

Response to Comment 11 (Russ Robinson)

Overgrowth in the reaches below the Gold Street bridge has created a habitat for Norwegian dump rats, which in turn affects the ability of native species to nest successfully. The District board should consider an approach that would bring the area back to its natural condition. The Cargill salt ponds should not be used to capture floodwaters.

Please refer to Responses to Comments 19-8 and 19-13.

Response to Comment 12 (Tom Lane, Alviso)

The commenter invited the District board to tour the lower river reaches so that they can witness the problems that have been identified by the community. District Watershed Manager Dave Chesterman confirmed that he had toured the lower reaches with the commenter and found the tour to be valuable.

Thank you for the offer of a tour of the lower river and Alviso Slough. Mr. Lane participated in a site visit in October 2001 and voiced his concerns regarding the problems identified by the community.

Attachment A

Summary of Water Quality Data for the Guadalupe River

Attachment A

Summary of Water Quality Data for the Guadalupe River

Surface water quality in rivers depends primarily on:

- the mineral composition of the soils and associated parent materials in the watershed,
- the hydrologic and hydraulic characteristics of the river and its watershed, and
- the types of contaminant sources present in the watershed and river corridor.

In general, the water quality characteristics of greatest importance to fish and wildlife are temperature, turbidity, growth of "nuisance algae", concentrations of dissolved oxygen and of biostimulatory nutrients such as nitrogen and phosphorus, and presence of toxic constituents, including heavy metals and un-ionized ammonia.

No routine water-quality monitoring is performed on the Guadalupe River at present, and with the exception of the results of the analyses performed for the Guadalupe Creek Mitigation Project (described below), very little water quality information is available. The watershed includes high- and medium-density urban residential developments as well as rural, open space, and undeveloped mountainous areas. Thus, potential contaminants in the system are diverse.

Occasional water quality monitoring has been conducted by various entities on the Guadalupe River since 1946. Table 1 summarizes these data. Water was frequently not analyzed for mercury and when it was analyzed, mercury concentrations were frequently not detected. The analysis was done only for dissolved mercury and does not report the total mercury concentration. Additionally, no clear relationship between flow and mercury concentration or between turbidity and mercury concentration can be drawn. The historic data provide no insight into how mercury moves in the Guadalupe River system in response to floodflows or how much of it may be transported to the baylands. The data do, however, show that mercury is present in the river.

The most comprehensive water quality study on the Guadalupe River system was performed in September 2000 to establish a baseline understanding of water quality in and upstream from the Guadalupe Creek restoration area (Tetra Tech 2000). Water samples were collected from 8 sites within the project reach and 4

TABLE 1. U.S. Geological Survey Selected Historical Water Quality Data for the Guadalupe River for Various Water Years 1946 through 1994

	Feb 8 1946	Nov 6 1967	Mar 7 1968	Oct 29 1968	May 20 1969	Aug 1 1979	Feb 19 1980	Sep 10 1980	Mar 27 1981	Sep 1 1981	Jan 5 1982	Sep 8 1982
Streamflow (cfs)	NA	1	14	2	NA	NA	7,900	0.53	3.7	728	943	2.8
Temperature (Celsius)	NA	14	14	15	10	NA	12.5	18	15.5	19.5	11	23
pH	NA	NA	NA	NA	NA	NA	6.8	7.8	8	8	7.9	7.5
Turbidity (NTUs)	NA	NA	NA	NA	NA	NA	800	4	16	2.6	270	1.5
Dissolved oxygen (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	84	9.8	10.5	116
Chemical oxygen demand (mg/L COD)	NA	NA	NA	NA	NA	NA	280	39	43	69	47	30
Hardness (mg/L $CaCO_3$)	140	NA	NA	NA	NA	NA	68	350	130	NA	113	200
Total nitrogen (mg/L N)	NA	NA	NA	NA	NA	2.1	0.93	1.2	0.82	1.4	1.8	0.4
Total phosphorus (mg/L P)	NA	NA	NA	NA	NA	0.07	2.8	0.22	0.21	0.24	0.25	0.09
Dissolved arsenic (μg/L As)	NA	NA	NA	NA	NA	NA	2	4	10	2	2	2
Dissolved cadmium (μg/L Cd)	NA	<1.4	<1.4	<1.4	<1.4	<1	0	0	1	0	1	<1
Dissolved chromium (μg/L Cr)	NA	<1.4	<1.4	<1.4	<1.4	0	0	0	10	0	<10	<10
Dissolved copper (μg/L Cu)	NA	<1.4	<1.4	<1.4	<1.4	2	2	2	6	2	2	5
Dissolved lead (μg/L Pb)	NA	<1.4	<1.4	<1.4	<1.4	0	0	2	3	5	6	<1
Dissolved manganese (μg/L Mn)	NA	171	19	15	20	30	10	0	20	0	20	20
Dissolved mercury (μg/L Hg)	NA	NA	NA	NA	NA	0	0	0	0	0.36	<0.1	<0.1
Dissolved nickel (μg/L Ni)	NA	234	9.7	43	37	0	0	0	0	0	<100	<100
Dissolved selenium (μg/L Se)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved silver (μg/L Ag)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved zinc (μg/L Zn)	NA	<5.7	<5.7	<5.7	<5.7	6	190	10	20	40	10	30

upstream sites. For the most part, samples were collected in midstream at middle depths. Analyses followed standard laboratory procedures for each constituent analyzed. Table 2 summarizes the results of the water quality analyses.

Table 2. Summary of Guadalupe Creek Water Quality Data, September 2000

Parameter	Minimum	Maximum	Mean
Project Reaches			
pH	6.5	8.1	7.7
Conductivity (mS)	0.340	0.360	0.339
Temperature (°C)	14.0	19.8	17.4
Dissolved oxygen (mg/l)	4.40	11.4	9.09
Turbidity (NTU)	0	55	25
Suspended Solids (mg/l)	<10	13	<10
Dissolved organic carbon (mg/l)	<1	1.17	<1
Total organic carbon (mg/l)	<1	1.36	<1
Methyl mercury (ng/l)	0.315	0.934	0.570
Total mercury (ng/l)	11.6	73.9	32.0
Upstream from Project Reaches			
pH	8.0	8.2	8.1
Conductivity (mS)	0.303	0.308	0.306
Temperature (°C)	14.7	15.6	15.0
Dissolved oxygen (mg/l)	4.44	5.47	5.04
Turbidity (NTU)	2.0	16	6.5
Suspended solids (mg/l)	NA	NA	NA
Dissolved organic carbon (mg/l)	<1	1.12	<1
Total organic carbon (mg/l)	<1	<1	<1
Methyl mercury (ng/l)	0.720	1.610	1.035
Total mercury (ng/l)	38.6	1380	403.8

Because of the concern regarding mercury contamination of water, soil, and sediments in the Guadalupe Creek restoration area, the September 2000 study also analyzed 12 samples of sediment from the active low-flow channel of Guadalupe Creek within and upstream from the project reach. Analyses were performed on dried samples and followed standard laboratory procedures. Table 3 summarizes the results of these additional analyses.

Table 3. Summary of Mercury Content in Guadalupe Creek Streambed Sediments, September 2000

Parameter	Minimum	Maximum	Mean
Methyl mercury (µg/g)	0.0004	0.0420	0.0055
Total mercury (µg/g)	0.350	31.70	11.10

µg/g = micrograms per gram, dry weight

Source: Tetra Tech 2000

The September 2000 water quality study performed for this project included analyses of porewaters in the upper 2 centimeters of sediment in the bed of Guadalupe Creek's active low-flow channel. Samples were collected at the same sites used for water sampling. Table 4 presents the results of sediment porewater analyses.

Table 4. Summary of Mercury Content in Porewaters and Upper 2 cm of Guadalupe Creek Streambed, September 2000

Parameter	Minimum	Maximum	Mean
Methyl mercury (ng/l)	0.16	60.6	12.6
Total mercury (ng/l)[b]	18.5	91.5	36.4

ng/l = nanograms per liter

Source: Tetra Tech 2000

At most of the sample sites, methyl mercury content in shallow porewaters was markedly higher than that in creek waters from the same site. This suggests that mercury methylation may be occurring in situ in the shallow sediment column. The greatest increases in methyl mercury content were measured at sites downstream from areas supporting abundant vegetation; although data on organic content in the sediment column are not available, increased organic content in the shallow sediment column may contribute to in situ methylation.

Finally, in order to assess biologic uptake of mercury from creek waters and/or sediments, the September 2000 study also analyzed the mercury content of emergent and submergent vegetation from project reach and upstream sample sites. Five samples were collected within the project reaches and 1 sample was collected upstream from the project site. Samples included filamentous green algae, spikerush (*Eleocharis* sp.), and water cress. All samples were analyzed for total mercury and moisture content; 3 samples, representing the range of total mercury concentrations measured were then analyzed for methyl mercury content. Table 5 summarizes the results of these analyses.

Table 5. Summary of Mercury Content in Guadalupe Creek Plant Samples, September 2000

Parameter	Minimum	Maximum	Mean
Methyl mercury (μg/g)	0.018	0.093	0.048
Total mercury (μg/g)	0.23	5.32	2.14

μg/g = micrograms per gram, dry weight

Source: Tetra Tech 2000

Although the waters of Guadalupe Creek are generally fairly well oxygenated and moderately alkaline (table 2), the results of the September 2000 water quality analyses clearly indicate that methylation of mercury occurs in the upper reaches of the Guadalupe River system under existing conditions and imply that it may occur within the LGRP as well.

Most mercury in the freshwater environment is chemically bound to suspended particles of soil or sediment; a smaller fraction is bound to dissolved organic carbon. Sediment-bound mercury may still be available to aquatic organisms and thus remains a pollutant of concern. The potential for adverse environmental effects from sediment-bound mercury depends primarily on transport and depositional characteristics (e.g., particle size), and the physical and chemical properties of the sediment. Additionally, sediment-bound mercury may be converted through both biotic and abiotic processes to its more bioavailable methylated form.

The greatest concern with regard to the accumulation and transport of mercury in the watershed is the potential for mercury methylation. Methyl mercury is readily adsorbed by aquatic plants, fish, and wildlife, and has been demonstrated to accumulate in their tissues.

Factors conducive to methylation of mercury include: low-flow or stagnant waters, hypoxic or anoxic conditions in the water column, low pH (< 6), and high concentrations of dissolved carbon. Most of these factors are in turn affected by biological processes such as metabolism, growth, and decay.

Because methylation is affected by changes in physical and biological conditions, it is likely that the rate and quantity of methyl mercury formation changes seasonally; seasonal variation in flow velocity and volume probably also contribute to variation in methylation rates.

During the winter rainy season, streamflow is high and rapid and even in the deepest pools turbulence overturns the water column and likely keeps the water well oxygenated. Because oxygen is more soluble in water at lower temperatures, cooler winter water temperatures are also expected to foster oxygenation throughout the water column. By contrast, during the warm, dry summer months, flow rates drop significantly and the river's deep pools may approach a stagnant condition, decreasing oxygenation of bottom waters; warmer summer water temperatures may also reduce oxygenation. These conditions typically intensify throughout the course of the summer and fall dry season. During the late summer and fall, methylation may thus occur in deep, slow-moving pools in the rivers's main channel.

Chapter 5

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Appendix A

Final
Environmental Impact Report

SANTA CLARA VALLEY WATER DISTRICT
LOWER GUADALUPE RIVER PLANNING STUDY
FINAL ENVIRONMENTAL IMPACT REPORT
PROJECT NO. 3015

Final Environmental Impact Report Prepared by Jones & Stokes under the Direction of

Nai Hsueh, P.E.	Deputy Chief Operating Officer
Dennis Cheong, P.E.	Senior Project Manager
Terry Neudorf	Environmental Planner, Guadalupe Watershed

(Engineer's Report – Bound Separately)
Prepared by
CH2M HILL, Inc.

Walt Wadlow	Dave Chesterman
Chief Operating Officer	Guadalupe Watershed Manager

June 6, 2002

SCH # 2000042051

DISTRICT BOARD OF DIRECTORS

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Overview of Changes from Draft to Final EIR

This Final Environmental Impact Report (EIR) for the Lower Guadalupe River Flood Protection Project (LGRP) contains a description of project elements, planning and design analyses and information on the project setting and impact conclusions that have been developed over the past 2.5 years. Decisions about project objectives, project design, alternatives, impact analyses and the general content of the LGRP Engineer's Report and the LGRP Final EIR are based on input from numerous planning and environmental studies, project meetings, a detailed public involvement process, and resource agency and project stakeholder meetings. The Santa Clara Valley Water District's (District's) LGRP capital improvements budget and schedule for implementing the project were also considerations that influenced project decision making. The LGRP setting, impacts, and mitigation measures for the Proposed Project and 2 alternatives are evaluated in chapter 3 of the Final EIR (appendix A).

However, since the issuance of the Draft EIR, there have been a number of changes in the analyses of the impacts of the Proposed Project and of the Baylands Mitigation Measure, and the mitigation of these impacts. This summary is intended to provide the reader with an overview of those changes in analysis. It is also intended to help guide the reader to the different parts of the Final EIR which are necessary for review of the full scope of environmental impacts and their mitigation.

A. The Draft EIR's Analysis of Impacts and Their Mitigation

Throughout the EIR process, the District has defined the LGRP area as extending from the I-880 crossing to the UPRR bridge (please refer to chapter 3 under Master Response A). Hydraulics used for LGRP design assumes that the Corps' upstream 100-year flood hydrograph with an instantaneous peak flow of 17,000 cfs is applied at the downstream face of the I-880 bridge. This hydrological assumption is based on the District's Local Cooperative Agreement with the Corps.

The Draft EIR assumed that the project would convey 17,000 cfs and that the District's freeboard requirements would be provided in the channel during a design flood event. No City drainage inflow was assumed because the District had initiated discussions with the Cities of San Jose and Santa Clara to restrict pumping to the lower Guadalupe River during the peak of the flood hydrograph. The Draft EIR further assumed that the District and Cities would implement an emergency pump operations plan (EOP). It was anticipated that the EOP would require local drainage pumping at up to 18 lower Guadalupe River pump stations to be shut off when the peak of the flood hydrograph at 17,000 cfs was passing through the LGRP area.

The Draft EIR analyzed the downstream flooding in the Baylands that could result from flood flows of 17,000 cfs being conveyed though the LGRP Proposed Project and found that flooding depths in Cargill Ponds A8D, A8W, A5, and A7 would increase by up to 1.3 feet compared to existing conditions. Flooding depths in all other salt ponds, Alviso Slough, New Chicago Marsh and the community of Alviso would be less than or the same as under existing conditions. No flooding was identified for the Don Edwards Wildlife Refuge (Pond A6).

In particular, section 3A in chapter 3, "Hydrologic and Hydraulic Conditions," includes an analysis of flooding induced by the LGRP downstream of the project limits (UPRR bridge) in the Baylands study area which includes Alviso Slough, Guadalupe Slough, Cargill Salt Ponds, New Chicago Marsh and the community of Alviso. Both the Draft and Final EIRs conclude that Guadalupe River-induced flooding in Cargill Salt Ponds and the community of Alviso from implementing the Proposed Project (at a 17,000 cfs flow) is a significant impact. Mitigation measures are recommended in section 3A to reduce the significant flooding impacts to less-than-significant levels. These measures, referred to collectively as the Baylands Mitigation Measure, include: 1) Mitigation Measure HH-1: Construct West-Perimeter Levee Around Alviso; 2) Mitigation Measure HH-2: Construct Alviso Slough Overflow Weir; 3) Mitigation Measure HH-3: Pump Cargill Salt Ponds and Pond A6 (Don Edwards Wildlife Refuge); and 4) Mitigation Measure HH-4: Manage Vegetation in Alviso Slough from UPRR Downstream to the Alviso Weir (see page 3A-13 through 3A-17 in appendix A). The Draft EIR assumed an acceptable agreement between the District and Cargill would be reached in implementing these measures.

Because the Baylands Mitigation Measure would itself have environmental impacts, these were addressed for each topical section in chapter 3 of both the Draft and Final EIRs (appendix A). The District considered the additive effect of the Proposed Project and Baylands Mitigation Measure in cases where both would affect a specific resource (e.g., wetlands). All of the impacts and mitigation measures identified for the Proposed Project (and alternatives) and the Baylands Mitigation Measure are disclosed in Final EIR Chapter 3 (in appendix A) assuming an LGRP floodflow of 17,000 cfs.

Chapter 4 of both the Draft and Final EIRs (in appendix A) presents the cumulative impacts of the Proposed Project with Baylands Mitigation Measure when combined with other past, present, or reasonably foreseeable future projects that could have an impact on Guadalupe River or downstream resources. The cumulative analysis updates and expands a recent cumulative impact analysis prepared for the Downtown Guadalupe River Project. Again, this analysis in the Draft EIR assumed a floodflow of 17,000 cfs and an Emergency Pump Operations Plan that would restrict local drainage during peak floodflows.

B. Changes in Analysis Since the Issuance of the Draft EIR

The following changes in the analysis of impacts and mitigation have been made since the issuance of the Draft EIR and are reflected in the Final EIR:

- Additional hydraulic analyses related to the Baylands Mitigation Measure were performed and new Baylands levee elevations were obtained since the time the Draft EIR was circulated. As a result, the Proposed Project at 17,000 cfs flow was determined to have a slightly greater flooding effect on salt ponds west of Alviso Slough, and minor flooding (approximately 2 feet) was identified for the Don Edwards Wildlife Refuge (Pond A6). The flooding in Pond A6 under Proposed Project assumptions was not identified in the Draft EIR and is considered an increase in the magnitude of impacts associated with the Baylands Mitigation Measure. The flooding impact on wildlife (western snowy plover and salt marsh harvest mouse) in Pond A6 would be reduced to a less-than-significant level by modifying Mitigation Measure HH-3 to include use of a temporary pump on Pond A6 to evacuate floodwaters and would also include hardening of the Pond A6 internal levee.
- As a result of ongoing study of the local drainage issues and coordination with the Cities of San Jose and Santa Clara, the District reevaluated the local drainage pumped inflow assumption made in the Draft EIR. After further study, the District concluded that up to an additional 1,350 cfs

from pump stations and outfalls could be conveyed by the LGRP project. An EOP was determined to not be necessary for a design flood event, although it may be needed for larger events. Details of the assumptions for this drainage study are contained in appendix C, Technical Memorandum, Evaluation of Effects of Interior Drainage Flows on LGR Hydraulic Conditions (Northwest Hydraulic Consultants 2002). The additional 1,350 cfs of flow would be safely conveyed assuming a slight reduction of the design freeboard from 3.5 to 3 feet. Three feet of freeboard in the channel meets the Corps' freeboard requirement. It was determined that this additional flow could be accommodated by the LGRP Proposed Project with no changes to the project elements proposed under the Proposed Project at 17,000 cfs.

- As a result of these studies, in the Final EIR, the cumulative impacts analysis in chapter 4 (appendix A) was modified to assume that additional pumped and outfall drainage of 1,350 cfs would be added to the Proposed Project flow of 17,000 cfs. Therefore, the flood flow evaluated in the cumulative impact analysis is 18,350 cfs. The analysis of cumulative impacts from this cumulative scenario flood flow was similar to that of the LGRP Proposed Project at 17,000 cfs although the volume and depth of flooding in downstream Cargill Salt Ponds (A8D, A8W, A5, and A7), and the refuge (Pond A6) are slightly greater. All of the cumulative impacts were reevaluated. Based on discussions with U.S. Fish & Wildlife Service and additional analyses, no new significant impacts (i.e., infrequent flooding impacts on special-status wildlife) were identified that were not already disclosed in the Draft EIR. Flooding impacts on western snowy plover and salt marsh harvest mouse in Pond A6 are considered an increase in the magnitude of cumulative impacts, not a new impact type that was not previously considered. The 18,350 cfs cumulative flow would increase depths of flooding in Cargill Salt Ponds and would increase the depth of flooding in Pond A6 compared to existing conditions (zero feet versus approximately 3.5 feet) and compared to the Proposed Project (approximately 2 feet versus 3.5 feet). Flooding in Alviso Slough, New Chicago Marsh and the community of Alviso are similar to the LGRP Proposed Project flows at these locations.

- The cumulative impact analysis in the Final EIR addresses flood hazards/hydraulic conditions, geomorphology, water quality, vegetation, wildlife, fisheries, cultural resources, and other resources areas (hazardous materials, land use, recreation, public access and aesthetics, public services and utilities, transportation, air quality and noise). Mitigation measures are recommended for all significant cumulative impacts to reduce impacts to less-than-significant levels.

- No new mitigation measures have been recommended in the Final EIR that were not already disclosed in the Draft EIR. Mitigation Measure HH-2 was expanded to include hardening of the levee separating Pond A6 from Ponds A5 and A7. Mitigation Measure HH-3 was expanded to include temporary pumping of Pond A6. It has been determined that these changes to this mitigation measure will not themselves have any significant impacts.
- The Final EIR also incorporates revisions to mitigation measures in the vegetation and wildlife sections based on meetings with resource agency staff and comments received on the Draft EIR. Changes reflect a refinement and in some cases an expansion of mitigation measures (such as riparian and wetland restoration in mitigation measure V-1.)

Summary

Project Summary

Introduction

The Santa Clara Valley Water District (District) proposes to construct the Lower Guadalupe River Flood Protection Project (LGRP) in a 10.5-kilometer (km) (6.5-mile) project area along the lower Guadalupe River, between Interstate 880 (I-880) and the Union Pacific Railroad (UPRR) bridge in the cities of San Jose and Santa Clara (figure S-1). The LGRP proposes to modify previous flood-control improvements initiated in 1982 and 1995 on the lower Guadalupe River. These modifications would restore the flood conveyance capacity of the existing channel and provide additional capacity to convey floodflows of approximately 481 cubic meters per second (cms) (17,000 cubic feet per second [cfs]) during a design flood event. The proposed modifications would balance the need for flood-control structures and channel maintenance with the goal of protecting and enhancing environmental conditions and public access.

The District has authorized the LGRP and is the lead agency for compliance with the California Environmental Quality Act (CEQA). The intent of this environmental impact report (EIR) is to support decision making by the District and comply with public disclosure requirements of CEQA. The District had originally initiated a combined CEQA/National Environmental Policy Act (NEPA) process to support District and U.S. Army Corps of Engineers (Corps) decision making. In May 2001, the Corps informed the District that it would not pursue an environmental impact statement (EIS) because of the relatively minor impacts of the LGRP associated with discharge of dredged and fill material in jurisdictional waters of the United States, including wetlands (appendix A). The Corps will conduct a separate NEPA review as part of its Clean Water Act (CWA) permitting process.

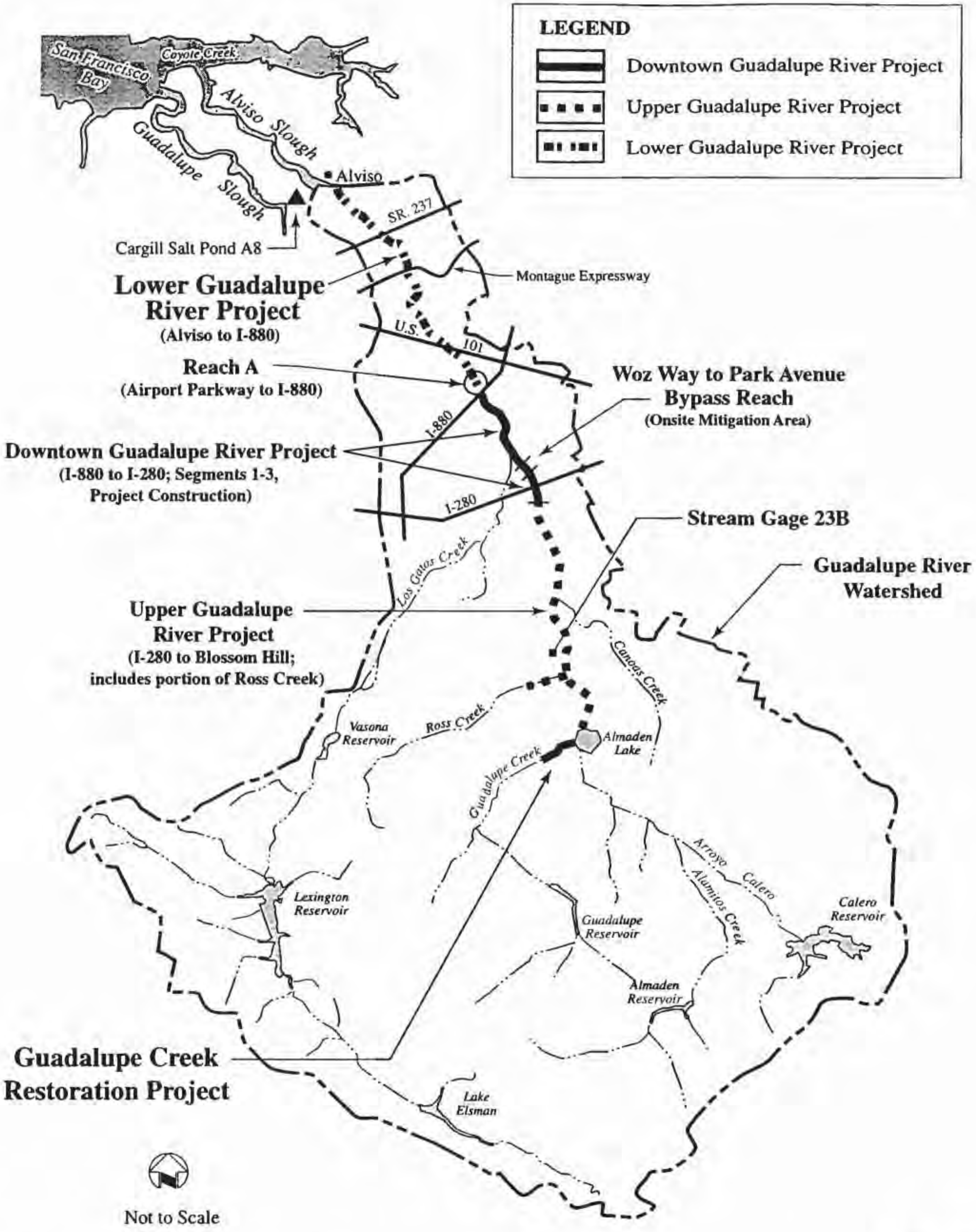
The LGRP is located downstream of the flood protection projects for both the upper Guadalupe River and downtown San Jose (figure S-2). Flood protection projects have been initiated for these 2 reaches. Proposed flood protection work for the upper Guadalupe River project has been authorized under Section 101(a)(9) of the Water Resources Development Act (WRDA) of 1999 (Public Law [PL] 106-53). The downtown San Jose Guadalupe River project has been authorized under Section 401(b) of the WRDA of 1986 (PL 99-662) and is a federally authorized project (U.S. Army Corps of Engineers 1993). The LGRP is required to convey design floodflows from both the upper river and downtown projects.

The District has determined that the LGRP may have a significant impact on the quality of the human environment and that an EIR is necessary under CEQA. The District will use the EIR to support project decision making and to meet CEQA requirements for disclosure of potential environmental impacts and mitigation measures.

Lower Guadalupe River History and Background

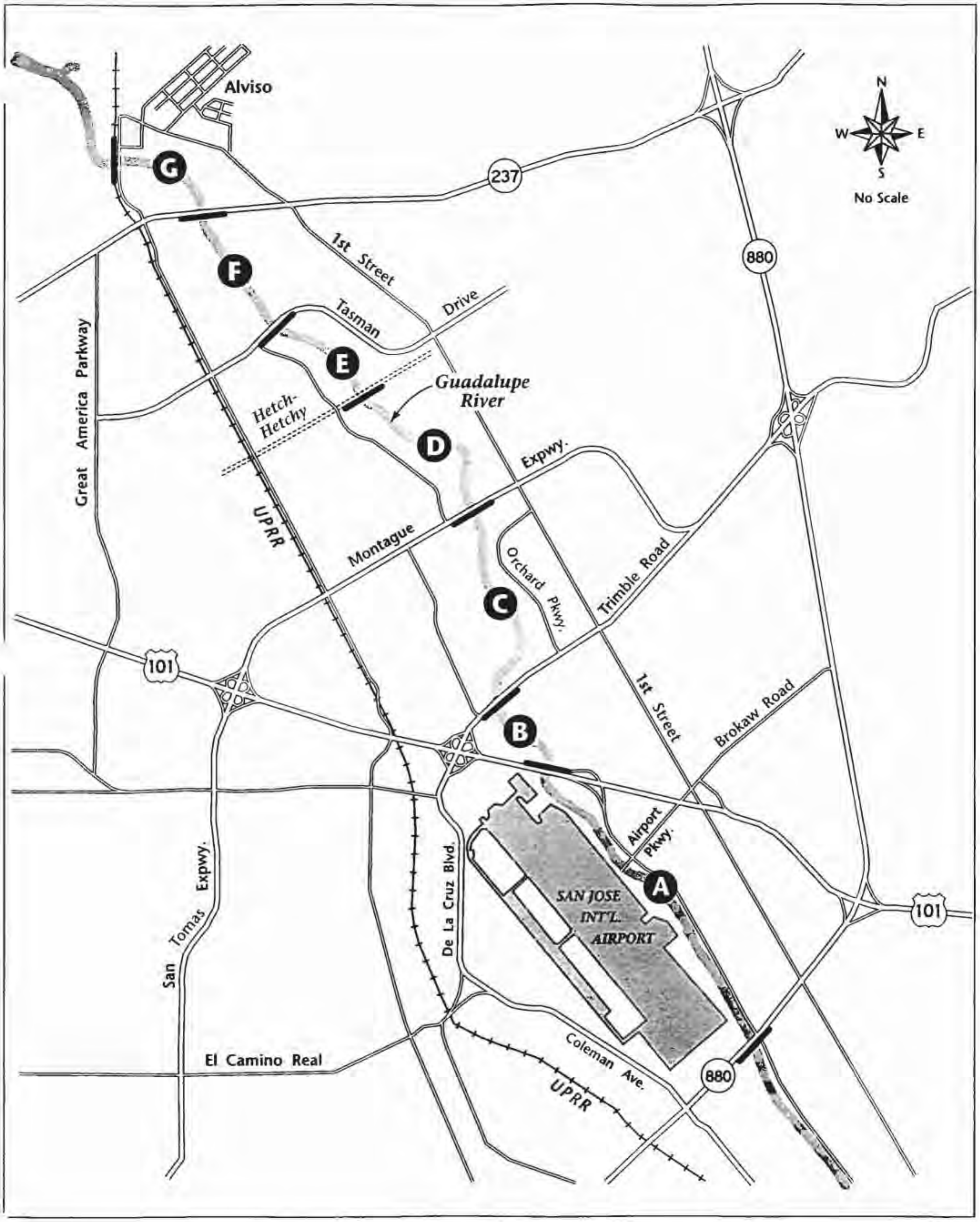
The Guadalupe River begins at the confluence of Alamitos Creek and Guadalupe Creek, just downstream of Coleman Road in San Jose. From its beginning, the river flows north approximately 22.5 km (14 miles) through urbanized portions of San Jose and Santa Clara, eventually discharging into San Francisco Bay through Alviso Slough (figure S-1). At State Route (SR) 237, the Guadalupe River has a total drainage area of approximately 414 square kilometers (km^2) (160 square miles). The lower Guadalupe River reaches receive runoff from an urbanized region, which comprises a steep upper watershed, an urban residential and light commercial zone, and a significantly developed and growing downtown commercial zone. Storm drainage from these areas and from stormwater pump flows within the project area are also currently discharged into the lower Guadalupe River, adding to the volume of runoff.

Since 1940, there have been 10 noteworthy floods, the most recent ones in 1982, 1983, 1986, 1995, and 1998. The March 1995 flood was the largest, with instantaneous peak discharge (i.e., outflow rate) of 310 cms (11,000 cfs) at the Guadalupe gaging station, downstream of Los Gatos Creek. Because of the lower Guadalupe River's historical flooding potential, several flood-control projects have been implemented since the 1940s. In 1963, the historical river channel was modified in the "central zone" (an area encompassing the lower Guadalupe River). The modified channel, designed to convey a peak flood discharge of 340 cms (12,000 cfs), consisted of a trapezoidal cross section with benches between the main


LEGEND
Downtown Guadalupe River Project
Upper Guadalupe River Project
Lower Guadalupe River Project
San Francisco Bay
Coyote Creek
Alviso Slough
Guadalupe Slough
Alviso
SR. 237
Cargill Salt Pond A8
Montague Expressway
Lower Guadalupe River Project
(Alviso to I-880)
U.S. 101
Reach A
(Airport Parkway to I-880)
Woz Way to Park Avenue Bypass Reach
(Onsite Mitigation Area)
I-880
Downtown Guadalupe River Project
(I-880 to I-280; Segments 1-3, Project Construction)
I-280
Stream Gage 23B
Los Gatos Creek
Guadalupe River Watershed
Upper Guadalupe River Project
(I-280 to Blossom Hill; includes portion of Ross Creek)
Canoas Creek
Vasona Reservoir
Ross Creek
Almaden Lake
Guadalupe Creek
Arroyo Calero
Alamitos Creek
Lexington Reservoir
Calero Reservoir
Guadalupe Reservoir
Almaden Reservoir
Guadalupe Creek Restoration Project
Lake Elsman
N
Not to Scale

09230.99 540 (7/01)

Figure S-1. Guadalupe River Watershed Including Project Construction Areas



09230.99 540 (7/01)

Figure S-2. Location Map Showing Lower Guadalupe River Reaches channel and the constructed levees. In 1983, the District again improved the lower Guadalupe River channel by raising and setting back levees, excavating channels in the overbank (between the low-flow channel and new levee toes), and recommending maintenance to the design cross section of the channel (Santa Clara Valley Water District 1982). The 1983 improvements were designed to convey a peak flood discharge of 481 cms (17,000 cfs) from U.S. 101 to the UPRR bridge. Implementation of a sediment maintenance plan began as part of this project. Subsequent channel maintenance activities varied from year to year until approximately 1992, when sediment management on the lower Guadalupe River was suspended because of regulatory limitations and concerns about biological effects. In 1995, the District raised the lower Guadalupe River levees at selected locations between the UPRR bridge and U.S. 101.

The current lower Guadalupe River is confined within flood-control levees. Both the low-flow and flood conveyance channels have been straightened and confined by the previous projects. As a result, the low-flow channel is incised throughout the reach, and sediment accumulates between the low-flow channel and the toe of the levees during annual high-flow events. Sediment deposition and vegetation growth in the channel have reduced the overall capacity of the lower Guadalupe River channel from its 1983 capacity of 481 cms (17,000 cfs) to approximately 400 cms (14,000 cfs). In addition, ground subsidence within the reach has altered the river's longitudinal slope. The lower end of the reach also has daily tidal inflow and outflow that extends upstream of Tasman Drive and results in tailwater effects on the riverflows. Fine sediments are deposited and hardened in these tidally influenced sections of the river, causing a continuing gradual decline in the river's hydraulic conveyance capacity.

To maintain as much channel capacity as possible, the District manages vegetation growth in portions of the lower Guadalupe River flood channel. Current LGRP flood-control planning for the lower Guadalupe River has focused on restoring channel capacity to approximately 481 cms (17,000 cfs) to meet the terms of the District's Local Cooperative Agreement (LCA) with the Corps, which was signed in March 1992. Under the terms of the LCA, the District would operate and manage the lower Guadalupe River to provide the Corps design floodflow capacity. Inability to meet the LCA requirements could delay or jeopardize completion of the downtown Corps project. Currently, the downtown project is anticipated to be completed in 2004. The LGRP was initiated as a District study after the lower Guadalupe River was found to have inadequate capacity to carry design floodflows from the 1995 storm events.

The lower Guadalupe River project was originally constructed in 1983, encompassing a reach from the UPRR bridge in Alviso to U.S. 101, to provide the Corps design floodflow capacity. Based on the data collected from the January and March 1995 storm events, a hydraulic analysis showed that this flood capacity was not provided. The analysis identified sediment deposition and vegetation growth as the main causes of reduced in-channel capacity.

In spring 1995, the District assembled an emergency project team to investigate options to restore the lower Guadalupe River's flood capacity in the interim period before completion of a comprehensive, multiobjective planning study and capital improvement project. An interim levee restoration project was constructed in summer 1995 to carry the Corps' design floodflow with 50% of the design freeboard.

Hydraulic analyses were conducted to determine the flow rate at which the river would overtop the levees along the various reaches. It was determined that flows of approximately 400 cms (14,000 cfs) would overtop the existing levees between Tasman Drive and Montague Expressway. Downstream of Tasman Drive, the river would overtop the levees at flow rates of approximately 481 cms (17,000 cfs). Upstream of Montague Expressway, the overflow capacity gradually increases to 425 cms (15,000 cfs) and to 566 cms (20,000 cfs) between each of the successive upstream reaches.

Once the downtown project is completed, peak floodflows would be able to pass in greater volume to the lower Guadalupe River. The LGRP would be designed and constructed to ensure that the channel improvements are operated and managed to convey the design floodflow at Alviso.

Planning for the LGRP also included a reconnaissance-level investigation of an Alviso baylands study area downstream of the UPRR bridge. One of the major conclusions of the Alviso baylands investigation is that this study area is subject to flooding from several sources other than the lower Guadalupe River, including the baylands reaches of Coyote Creek and Guadalupe Slough, and the extreme tide/storm surge events in south San Francisco Bay.

Purpose of and Need for the Project

The purpose of the LGRP is to provide improved flood protection for residents and businesses in San Jose and Santa Clara that are located in the floodplain of the lower Guadalupe River.

The District needs additional flood capacity in the lower Guadalupe River because it does not have the ability to convey the Corps' design flood event with a peak flow of 481 cms (17,000 cfs). The District must also implement LGRP improvements before completing the upstream flood-control improvements in the Downtown Project of the Guadalupe River to ensure that floodflows in the upper reaches can be carried through the lower Guadalupe River reaches. The need for LGRP improvements is also well substantiated by historical flooding and flood damage and hazards in San Jose and Santa Clara. Flooding has inundated as many as 2,104 hectares (5,200 acres) during the most severe floods (Santa Clara Valley Water District 1999). River flooding has caused bank erosion, debris accumulation, sediment deposition, and damage to homes, businesses, roadways, bridges, and other facilities. A design floodflow without the Downtown Project and the LGRP would inundate approximately 3,273 residential units, 951 commercial and industrial properties, and 66 public structures. Approximately 4,290 buildings would be flooded; flood damages are estimated at $560 million.

Objectives

The following primary objectives were developed by the District and were used to develop alternative plans for the project. The proposed alternatives are considered consistent with the project objectives.

- Provide channel capacity in the lower Guadalupe River to safely carry the floodwaters to be contained by the downtown improvement in accordance with the terms of the Corps LCA.
- Reduce bank erosion and sedimentation-related impacts along the lower Guadalupe River.
- Avoid potential adverse impacts on fish and wildlife habitats.
- Minimize impacts on the river's environmental resources and restore some of the lost historical functions and value of the riparian corridor where feasible.
- Provide long-term riparian habitat improvement to offset impacts that result from the construction of flood-control facilities.
- Provide mitigation of unavoidable adverse impacts on environmental resources.
- Provide opportunities to protect and enhance the existing wetlands and riparian habitat, and improve conditions favoring chinook salmon and steelhead trout.

- Provide, where possible, a continuous maintenance access along the river that could be used as a future pedestrian trail extension.
- Identify potential project impacts on Alviso and bayland areas and mitigate significant impacts.
- Specify best management practices (BMPs) to protect water quality.

Summary of Alternatives

The LGRP investigation included a comprehensive process for screening alternatives. The full text of the screening analysis is presented in chapter 4 of the Engineer's Report. The objective of the alternatives analysis is to identify alternatives that meet the basic project purpose, can be implemented within the project schedule and at reasonable capital and long-term cost, and meet the project objectives listed in chapter 1, "Purpose of and Need for the Project." During the screening process, flood-control solutions that require the minimum modification necessary to solve the problem were preferred.

Specific and consistent criteria were developed to screen the alternatives and determine which practical alternatives would meet the project purpose. The screening criteria included consideration of an alternative's

- ability to meet the project purpose and objectives,
- capacity for implementation in a reasonable time period before the downtown project is completed,
- capital and maintenance costs,
- environmental effects,
- technical and operational feasibility, and
- perceived public use.

(See also chapter 2 of this EIR for a summary of the screening process and alternatives eliminated from further consideration, and chapter 4 of the Engineer's Report for details of the screening analysis.)

Stage 1 was used to evaluate conceptual project alternatives or strategies. A comprehensive range of potential solutions was considered to address flood control on the lower Guadalupe River. Alternative design concepts ranged from watershed-oriented solutions that would involve increasing flood storage capacity in upstream reservoirs to more traditional in-channel capacity modifications. The screening criteria were not applied in detail during this stage, ensuring that generally described alternatives that lacked detailed information were not unfairly removed from consideration. The following alternative concepts were evaluated during stage-1 screening:

- the No-Project Alternative;
- a nonstructural alternative;
- upstream floodwater storage alternatives;
- alternatives involving changes in upstream reservoir operations;
- a watershed transfer alternative;
- offstream storage basin alternatives;
- channel modification bank alternatives; and
- channel bypass alternatives.

Stage-1 screening resulted in elimination of all the alternative concepts except the channel modification and the channel bypass concepts. Channel modification and channel bypass concepts were evaluated in further detail in stage-2 screening because these alternatives were shown to significantly lower the water surface elevations in the lower Guadalupe River; they would also meet the project purpose and objectives in a technically feasible manner and at a capital cost and timeframe consistent with LGRP goals.

Stage-2 screening of the channel modification and channel bypass concepts involved evaluating 9 specific alternatives:

- Channel Bank Modification,
- Levee Paving,
- Floodwalls,
- Setback Levees,
- Bridge Crossing Modifications,
- Channel Excavation/Dredging,
- Sediment Management,
- Vegetation Management, and
- Channel Bypass.

Stage-2 screening resulted in narrowing the 10 alternatives to a short list of 4 action alternatives (plus the No-Project Alternative) that would be further scrutinized in stage-3 screening:

- the Channel Bank Modification Alternative,
- the Floodwalls/Levee Raise Alternative,
- the Channel Excavation/Dredging Alternative, and
- the Channel Bypass Alternative.

These alternatives were generally chosen because they met the design floodflow and cost criteria, could be considered stand-alone alternatives that meet project objectives, and generally could be constructed to meet environmental, technical, and public-use criteria.

The stage-2 analysis concluded that all 4 action alternatives would be carried forward to the stage-3 analysis. The Channel Bypass Alternative was included in the stage-3 analysis even though its capital cost and implementation time did not pass stage-2 screening. The Channel Excavation/Dredging Alternative was also evaluated in stage 3 and eliminated because of the need for substantial recurring maintenance costs, substantial wetland impacts, and failure to meet public-use criteria.

Based on a comparison of the relative ability of the short-listed alternatives to meet screening criteria, the No-Project Alternative, Floodwalls/Levee Raise Alternative, and Channel Bank Modification Alternative are evaluated at a similar level of detail in the draft EIR to provide a thorough evaluation of the 2 most feasible alternatives. Both action alternatives are found to exhibit the greatest balance between the need to provide feasible flood-control solutions on the lower Guadalupe River and the objective of completing the project in a manner that maintains and enhances river conditions for the benefit of District constituents. The EIR also evaluates the Channel Bypass Alternative even though it was found to be less feasible than the Floodwall/Levee Raise and the Channel Bank Modification Alternatives. See chapter 4 of the Engineer's Report and the "Project Alternatives" discussion below for a detailed project description of each of these alternatives.

Three LGRP action alternatives meet the flood-protection and other objectives of the project on the lower Guadalupe River between the I-880 crossing and the UPRR bridge. Alternatives would be designed to convey a floodflow of 481 cms (17,000 cfs). These alternatives represent a reasonable range of alternatives as required under CEQA. A No-Project Alternative is also considered to meet the requirements of CEQA, but it would not meet the project objective for flood control. Alternatives considered in this EIR are:

- Alternative 1: No Project,
- Alternative 2: Floodwalls/Levee Raise,
- Alternative 3: Channel Bank Modification, and
- Alternative 4: Channel Bypass.

The following text describes the alternatives evaluated in this draft EIR. It was determined that Alternative 2, Floodwalls/Levee Raise, is the Proposed Project for purposes of this environmental review. The environmental impacts of Alternatives 1–3 are evaluated in similar detail to ensure that these 3 alternatives are considered more thoroughly than required under CEQA before a project is selected by the decision makers. Alternative 4 (Channel Bypass) is evaluated at a slightly lesser level of detail than Alternatives 1–3 because even though its capital cost and implementation time make it less feasible than Alternatives 2 and 3, it could result in improvement of some environmental conditions. The alternatives are focused on in-channel improvements within the LGRP limits, taking into consideration the potential floodflow impacts downstream of the project in and around Alviso Slough.

For project planning purposes, the LGRP has been divided into 7 reaches (figure S-2) to simplify consideration of construction elements and discussion of environmental impacts:

- reach A: I-880 to U.S. 101,
- reach B: U.S. 101 to Trimble Road,
- reach C: Trimble Road to Montague Expressway,
- reach D: Montague Expressway to the Hetch Hetchy Aqueduct,
- reach E: Hetch Hetchy Aqueduct to Tasman Drive,
- reach F: Tasman Drive to SR 237, and
- reach G: SR 237 to the UPRR bridge in Alviso.

The portion of reach A located upstream of Airport Parkway is coincident with the downstream reach of the downtown Guadalupe River project. This reach was also evaluated as part of the upper Guadalupe River project. For the purposes of the LGRP, the impacts of the flood-control features are assessed for the entire reach-A area. Although the Alviso baylands study area is outside the project area and is not considered part of the LGRP, the impacts of the Guadalupe River flows on this area is evaluated.

Alternative 1: No Project

CEQA requires a description and an analysis of a no-project alternative to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving a proposed project. The no-project alternative assumes existing conditions at the time that the Notice of Preparation (NOP) was circulated, which, for the LGRP, was April 19, 2000; it also assumes the conditions that would be expected to result in the foreseeable future if the Proposed Project were not approved. One of the consequences of Alternative 1, the No-Project Alternative, is that the upper and downtown Guadalupe River projects would not be allowed to operate and operational impacts associated with these projects would not occur.

The No-Project Alternative comprises the following flood-control features:

- continuation of current routine vegetation and sediment management activities, and
- continuation of routine inspections and maintenance of levees and access roads.

Alternative 2: Floodwalls/Levee Raise (Proposed Project)

Alternative 2, the Proposed Project, would include

- minor bank modification at the I-880 bridge approach in reach A;
- construction of up to 4 vortex rock weirs in the reach-A low-flow channel downstream of I-880;
- construction of floodwalls in reach A upstream of U.S. 101, in reach F upstream of SR 237, and in reach G;
- construction of levee raises in reaches B–F;
- replacement of the SR 237 eastbound bridge to match the westbound bridge profile;
- modification of up to 19 stormdrain outfalls;
- improvement of maintenance access roads and construction of maintenance road undercrossings at bridges;
- moderate to aggressive management of sediment and vegetation in reaches A–G;
- accommodation of future recreation trail extensions on LGRP levees; and
- levee maintenance.

The Proposed Project is also based on the assumption that vegetation and sediment in the channel would be managed at a moderate to aggressive level. Vegetation would be managed by mechanical or hand removal or herbicide application throughout reaches A–G in areas that are not designated as buffer areas or mitigation sites. Sediment management in designated excavation areas would be required in reaches B–E to maintain channel capacity. Maintenance activities in reach G would involve aggressive removal of wetland vegetation with a shallow 1-meter (m) (3.3-foot)-deep excavation to remove vegetation root mass.

In general, staging areas for all construction activities would be adjacent to District rights-of-way (ROWs) and would not affect sensitive wildlife or wetland areas or known historic or archaeological resources. Access to the construction sites would be from existing bridge crossings and levee maintenance roads.

Alternative 3: Channel Bank Modification

Alternative 3 would include

- minor bank modification at the I-880 bridge approach in reach A;
- construction of up to 4 vortex rock weirs in the reach A low-flow channel downstream of I-880;
- construction of floodwalls at the upstream and downstream approaches of U.S. 101, Trimble Road, and Montague Expressway;
- excavation of the inboard toe of the existing levees and construction of a vertical or near-vertical channel wall with an apron at the resulting channel bench between Montague Expressway and the UPRR bridge (reaches D–G);
- construction of a channel wall extension up to 1 m (3.3 feet) high above the top of the levee between Montague Expressway and the UPRR bridge (reaches D–G);
- possible realignment of the Hetch Hetchy Aqueduct;
- improvement of the maintenance access roads; and
- moderate to aggressive sediment and vegetation management in reaches A–G.

Vegetation and sediment management in the channel would be same as that described for the Proposed Project.

Construction features and staging areas for Alternative 3, including areas for construction of mechanically-stabilized-earth (MSE) wall improvements, would be much the same as those for Alternative 2. Like the Proposed Project, this alternative would also include implementation of an adaptive management and monitoring plan as part of a mitigation and monitoring plan.

Alternative 4: Channel Bypass

The Channel Bypass Alternative would involve increasing the capacity of LGRP reaches A–G by constructing 2 bypass culverts to convey the design floodflow of 481 cms (17,000 cfs). Alternative 4 would include the following flood-control features:

- increasing the height of levees and performing some channel excavation in reach A;
- constructing 2 new bypass box culverts entirely within the confines of the existing east and west lower Guadalupe River levees;
- improving maintenance access roads and accommodating future recreation trails on levees; and
- moderately to aggressively managing sediment and vegetation in reaches A–G.

This alternative would involve the construction of 2 bypass box culverts that would convey the design flows that exceed the existing capacity of the lower Guadalupe River to a downstream discharge location in the baylands study area. Construction of bypass structures at lower Guadalupe River bridge crossings may require realignment of the bypass culverts outside the current channel ROW in a manner that may encroach on adjacent buildings and other land uses, potentially requiring acquisition of additional ROW. Construction of both the west and east bypass culverts would require realignment of the Hetch Hetchy Aqueducts. The pipelines would need to be extended below the bypass culvert inverts.

Sediment and vegetation management under Alternative 4 would be similar to that described for the Proposed Project.

Summary of Impacts and Mitigation Measures

A summary of impacts associated with each alternative and the level of significance and mitigation measures for each is contained in table S-1.

Comparison of Alternatives

Proposed Project and Channel Bank Modification Alternative

The Channel Bank Modification Alternative would have slightly greater impacts on wetland habitat than the Proposed Project because portions of a channel apron would need to be constructed in and immediately adjacent to wetlands in reaches D–G. Loss of riparian forest and riparian scrub habitat from construction of flood-control structures (floodwalls, raised levee, or channel modification structures) would be similar for both alternatives in areas where construction encroaches on or is adjacent to riparian vegetation in reaches A–D. Impacts on vegetation and wildlife from vegetation and sediment management would be the same for both alternatives; vegetation removal would be required in reaches A–G and sediment excavation would be required in reaches B–E. There would be no impacts on special-status wildlife under either alternative, and impacts on fisheries resources would be similar for both alternatives.

The Channel Bank Modification Alternative would have slightly greater potential for channel sedimentation and turbidity effects than the Proposed Project because greater levee excavation would be required under this alternative. (These effects are not considered significant with environmental commitments for implementing a soil management plan.) The potential for mercury contamination issues associated with both alternatives is considered less than significant because neither alternative would change the quantity of mercury in the Guadalupe River system and both alternatives would contribute to removal of sediment with elevated mercury levels. Under both alternatives, a soil management plan would be implemented to ensure that requirements for sediment disposal and reuse avoid adverse impacts from mercury contamination.

The potential to uncover known or unknown cultural resources would be greater under the Channel Bank Modification Alternative than under the Proposed Project because of the need for foundation excavation in reaches D–G associated with an MSE wall in these areas. Induced flooding effects under the Channel Bank Modification Alternative would be the same as those under the Proposed Project.

Induced flooding impacts in the town of Alviso, the Cargill salt ponds, and the USFWS refuge would be the same for both alternatives with and without implementation of the Baylands Mitigation Measure. In Alviso, flooding depths and duration would be less than under existing conditions; however, in a portion of the Cargill salt ponds, flooding depths, volumes, and durations would be greater than under existing conditions but would be mitigated to a less-than-significant level. Both alternatives would have minor impacts on special-status wildlife habitat in the area.

Proposed Project and No-Project Alternative

The No-Project Alternative would avoid all the short-term construction impacts associated with the Proposed Project; however, flooding would continue to affect the properties adjacent to the lower Guadalupe River. The Proposed Project would not result in significant unavoidable impacts that could not be mitigated to acceptable levels, and it would provide improved flood protection benefits. The No-Project Alternative, therefore, does not offer substantial advantages related to avoidance of environmental impacts.

The greatest benefit of the No-Project Alternative is that it would avoid construction and channel-maintenance impacts on biotic resources (mainly riparian and wetland habitats); however, avoidance of these impacts would come at the expense of flood-control benefits that would result from the Proposed Project. The No-Project Alternative also would not provide opportunities to remove sediments with elevated mercury levels because sediment management and a soil management plan would not be implemented in the lower Guadalupe River. Impacts on fisheries habitat would be greater under the Proposed Project than under the No-Project Alternative because of proposed vegetation management at bridge approaches and aggressive vegetation management in reach G.

Proposed Project and Channel Bypass Alternative

The Channel Bypass Alternative could have slightly greater beneficial impacts on water quality compared to the Proposed Project by removing more lead, mercury, and other contaminants from levee soils. It would have a slightly greater adverse impact on riparian wildlife species, particularly severe in reach C, from removal of more riparian habitat and on wetlands because the construction zone required for levee reconstruction and siting bypass culverts would have greater impacts on channel resources. Other impacts on common wildlife species are similar to those of the Proposed Project. Impacts on fisheries resources would be similar to those of the Proposed Project, although this alternative would have a greater adverse impact on fish habitat near the low-flow channel and create a greater potential for fish stranding in bypass culverts. The potential for conflicts with existing and proposed land uses could be greater than those identified for the Proposed Project because of more extensive construction area. This alternative would also require relocation of the Hetch Hetchy pipelines, which would not be required under the Proposed Project. Construction time would be increased, causing slightly greater impacts on air quality, traffic, and public services than under the Proposed Project.

Environmentally Superior Alternative

Section 15126.6(e) of the State CEQA Guidelines requires the District to identify the environmentally superior alternative. If the no-project alternative is also the environmentally superior alternative, the EIR will also identify an environmentally superior alternative from among the other alternatives.

On the basis of the analyses of the potential environmental impacts, the Proposed Project, the Floodwalls/Levee Raise Alternative, has been determined to be the environmentally superior alternative. The Floodwalls/ Levee Raise Alternative would cause slightly fewer impacts on biological resources (see "Vegetation and Wildlife" in chapter 3) and cultural resources (see "Cultural Resources" in chapter 3) than all other alternatives because floodwalls would be constructed on existing levees, and because levee raising would take place on the outboard side of the levees, away from sensitive wildlife habitat or wetlands or known cultural resources. In addition, the Floodwalls/Levee Raise Alternative would create fewer construction-related impacts (e.g., noise, reduced air quality, and traffic congestion) than the Channel Bank Modification Alternative or the Channel Bypass Alternative for most of the LGRP reaches. The construction needed for floodwalls and raising levees would generally be simpler than the construction necessary to excavate levees and build MSE or concrete walls in the channel, or to construct bypass culverts in existing levees.

One exception to this assessment is that the SR 237 bridge replacement (or bypass culverts), as required under the Proposed Project, would call for a high level of construction activity in a relatively concentrated construction zone along reach F. Construction activities would most likely cause traffic delays, although all 4 eastbound traffic lanes would remain open during construction of the new bridge.

Of the remaining alternatives considered in the EIR, the Channel Bank Modification Alternative would be the next environmentally superior alternative (please refer to chapter 2 under "Environmentally Superior Alternative").

The No-Project Alternative would create fewer impacts on biological resources than the Floodwalls/Levee Raise Alternative, but the No-Project Alternative would not meet the objectives of the LGRP for improved flood protection.

Baylands Mitigation Measure

The Proposed Project and the Channel Bank Modification and Channel Bypass Alternatives would require implementing 4 mitigation measures that are collectively described as the *Baylands Mitigation Measure* to reduce the downstream LGRP flooding impacts in Alviso Slough, the Cargill salt ponds, New Chicago Marsh, and Alviso that would result from containing the 481-cms (17,000-cfs) design flood event within the lower Guadalupe River channel. These measures are

- constructing a west-perimeter levee adjacent to Alviso on the east side of Alviso Slough between the UPRR and the Alviso Marina (Mitigation Measure HH-1);
- constructing an overflow weir in the levee separating Alviso Slough from Cargill Salt Pond A8W in an existing natural low spot in the levee (Mitigation Measure HH-2);
- installing temporary 1.42-cms (50-cfs) pumps on Ponds A5, A7, A8W, and A8D following flooding events to reduce the depth and duration of flooding in ponds (Mitigation Measure HH-3); and
- managing vegetation in Alviso Slough from UPRR downstream to the overflow weir (Mitigation Measure HH-4).

A description of these mitigation elements is presented in chapter 3 under the "Hydrologic and Hydraulic Conditions" section. The Baylands Mitigation Measure is presented in table S-1 and is analyzed throughout Chapter 3, "Environmental Setting, Impacts and Mitigation Measures," to ensure that the impacts of implementing this mitigation measure are disclosed.

Environmental Commitments

The LGRP has incorporated specific environmental commitments into the project design that would be incorporated into the Proposed Project and the Channel Bank Modification and Channel Bypass Alternatives. The purpose of making these environmental commitments is to avoid, minimize, or compensate for the environmental impacts created by the LGRP.

Public and Agency Involvement

Input from members of the public and from interested organizations and agencies was an essential component in the development and screening of the Proposed Project and alternatives and in scoping for this EIR. *Scoping* refers to the process used to identify the range of project alternatives and mitigation measures to be analyzed in depth, establish methods of assessment, and select the environmental effects to be considered in detail. Tools used in scoping for the LGRP include

- early public and interagency consultation,
- early open-house meetings to present possible project alternatives and analysis results,
- a scoping meeting and NOP process, and
- an agency representative site visit and roundtable discussions of project issues and alternatives.

In addition, the District has regularly published and mailed newsletters that update interested organizations and the public on LGRP progress, scoping activities, and alternatives development. The District has also conducted a detailed alternatives screening process to identify alternatives that would be addressed in the EIR.

On April 19, 2000, the District issued an NOP to inform agencies and the public that an EIR/environmental impact statement (EIS) was being prepared, and to invite comments on the document's scope and content and participation at a public scoping meeting. The NOP was published in both English and Spanish and mailed to people who live in the vicinity of the lower Guadalupe River, regulatory and public officials, and representatives of interested stakeholders. In addition, the Corps issued a Notice of Intent (NOI), which was published in the *Federal Register* on April 21, 2000.

On May 3, 2000, the District and the Corps held a public scoping meeting to solicit agency and public comments to determine the scope of what was then the EIR/EIS. More than 30 people from both the public and private sectors attended the scoping meeting. Attendees were given an overview of the meeting's purpose, proposed project and alternatives, and potentially significant environmental issues.

As a result of the public scoping process, the District prepared a scoping report that documented comments received during the public scoping meeting and summarized the types of comments. Twelve comment letters were received during the NOP/NOI process.

Table S-1. Summary of Impacts, Level of Significance or Type of Impact, and Recommended Mitigation Measures for the No-Project Alternative, Floodwalls/Levee Raise Alternative (Proposed Project), Channel Bank Modification Alternative, Channel Bypass Alternative, and the Baylands Mitigation Measure

Impact	Level of Significance	Recommended Mitigation Measure(s)
HYDROLOGIC AND HYDRAULIC CONDITIONS		
No-Project Alternative		
Floodwaters would not be contained in the river channel during the design floodflow, and portions of San Jose and Alviso would flood.	No change	None
Floodwalls/Levee Raise Alternative (Proposed Project)		
Reduction in the Potential for Flooding in San Jose and Santa Clara	Beneficial: Implementation of this alternative would increase the conveyance capacity of the lower Guadalupe River from 396 cms (14,000 cfs) to 481 cms (17,000 cfs).	None
Potential for Downstream Flooding Induced by the LGRP	Significant: The ability to convey 481 cms (17,000 cfs) could affect the magnitude and duration of flooding in Alviso, the Cargill salt ponds, and New Chicago Marsh.	*Baylands Mitigation Measure*, comprising the following: • *HH-1: Construct West-Perimeter Levee Around Alviso* • *HH-2: Construct Alviso Slough Overflow Weir and Harden Pond A6 Levee* • *HH-3: Pump Cargill Salt Ponds* • *HH-4: Manage Vegetation in Alviso Slough from UPRR Downstream to Overflow Weir* This measure would reduce the impact to less than significant by combining more levee protection with pumping in the ponds to reduce water levels.
Channel Bank Modification Alternative		
Reduction in the Potential for Flooding in San Jose and Santa Clara	Beneficial: (Similar to Proposed Project)	None
Potential for Downstream Flooding Induced by the LGRP	Significant: (Similar to Proposed Project)	*Baylands Mitigation Measure* (See above under Proposed Project)

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
HYDROLOGIC AND HYDRAULIC CONDITIONS (Continued)		
Channel Bypass Alternative		
Level of flood protection similar to the Proposed Project and beneficial.		
Potential for downstream flooding similar to the Proposed Project and would require implementation of Baylands Mitigation Measure.		*Baylands Mitigation Measure*
Baylands Mitigation Measure[1]		
No additional hydrologic or hydraulic impacts were identified. The measure will provide conveyance and storage capacity to mitigate the effects of the Proposed Project on the Cargill salt ponds, Alviso, and the surrounding area.	No impact identified	None
FLUVIAL GEOMORPHOLOGY AND GEOLOGIC HAZARDS		
No-Project Alternative		
The No-Project Alternative would not change bank stability or increase susceptibility to geologic hazards when compared to existing conditions.	No impact: Current vegetation and sediment management would continue. Bank stabilization measures would be implemented as necessary to protect adjacent properties and facilities. Sediment transport would be the same as under existing conditions.	None
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential for Increased Channel Erosion and Deposition	Less than significant: The Proposed Project would not substantially alter the velocity of floodflows.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
FLUVIAL GEOMORPHOLOGY AND GEOLOGIC HAZARDS (Continued)		
Potential Changes in River Morphology as a Result of Structural Flood-Control Elements	Less than significant: Structures would be located within the footprint of the existing levee. No change in long-term channel maintenance processes that control riffles, runs, and pools.	None
Potential Changes in River Morphology as a Result of Channel-Management Activities	Less than significant: Vegetation would not be removed from or immediately adjacent to the low-flow channel. Sediment removal would have no long-term effect because it would not be excavated from the low-flow channel; vegetation buffer would be preserved; only previously excavated areas would be disturbed.	None
Potential Decrease in Susceptibility of Lower Guadalupe River Levees to Geologic Hazards	Beneficial: Areas of levees that do not meet District standards will be repaired before levees are raised or floodwalls built.	None
Channel Bank Modification Alternative		
Potential for Increased Bank Erosion	Less than significant: The resulting levee structure would be stronger and more erosion-resistant with proposed reinforcement.	None
Potential for Increased Channel Erosion and Deposition	Less than significant: (Similar to Proposed Project)	None
Changes in River Morphology as a Result of Structural Flood-Control Elements	Less than significant: All structures would be located outside the low-flow channel and vegetation buffer would be preserved. No long-term change in channel maintenance processes.	None
Potential Changes in River Morphology as a Result of Channel-Management Activities	Less than significant: (Similar to Proposed Project)	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
FLUVIAL GEOMORPHOLOGY AND GEOLOGIC HAZARDS (Continued)		
Potential Decrease in Susceptibility of Lower Guadalupe River Levees to Geologic Hazards	Beneficial: Improvements would increase the safety factor of the levees under static and dynamic conditions.	None
Channel Bypass Alternative		
No impacts related to fluvial geomorphology and geologic hazards were identified. The system would be designed so that only flows exceeding 42.5 cms (1,500 cfs) would be diverted. Channel maintenance flows would not be altered.		
Baylands Mitigation Measure[1]		
Potential Changes in Patterns of Sediment Deposition	Less than Significant: Pumps would remove a portion of the extra sediment load. It is unlikely that mercury concentrations in pond sediments would be substantially different from background levels found in the salt ponds or San Francisco Bay.	None
Potential Changes in River Morphology	Less than significant: Flows would remain in the natural channel and overflow to Cargill only during large flood events.	None
WATER QUALITY		
No-Project Alternative		
Potential effects related to discharge of herbicides, sediments, and sediment-borne pollutants. There would be no benefit to water quality because sediments would not be removed from reaches B-E.	Less than significant: Herbicide application is during summer only and is well away from active channel; sediment removal limited to areas at bridge openings and materials removed are sand and gravels.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
WATER QUALITY (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential Release of Sediment and Sediment-Borne Pollutants during Construction	Less than significant: Soil disturbance would be intermittent and temporary. SWPPP and NPDES permits are part of the environmental commitments built into the project design.	None
Potential for Accidental Spills of Construction Materials	Less than significant: A spill prevention and response plan is part of the environmental commitments built into the project design.	None
Potential Degradation of Water Quality As a Result of Management Activities	Less than significant: Periodic sediment removal would be in compliance with SFBRWQCB requirements and follow BMPs as part of environmental commitments built into the project design.	None
Potential Discharge or Mobilization of Toxic Constituents—Mercury. Project could affect transport and methylation of mercury in lower Guadalupe River.	Less than significant: Erosion and sediment control plans are part of the environmental commitments built into the project design; soil management plan must be approved by the SFBRWQCB before construction begins.	None
Potential Increase in Methyl Mercury Formation	Less than significant: The Proposed Project would not affect development of instream conditions that would be conducive to enhanced methylation because the current channel structure or low-flow channel conditions would not be altered.	None
Potential for Increased Water Temperature	Less than significant: Flow rates and weather (e.g., humidity and solar radiation) are primary causes of changes in water temperature; these would not be affected by the Proposed Project and the effect on SRA cover would be minor.	None

[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
WATER QUALITY (Continued)		
Potential for Reduced Concentration of Dissolved Oxygen	Less than significant: Dissolved oxygen is related to temperature; temperature changes are not anticipated; therefore, there would be little change in dissolved oxygen.	None
Potential Change in Salinity of the Lower Guadalupe River and Alviso Slough. A change in the tidal prism could cause a shift in the salinity gradient.	Less than significant: The Proposed Project would not substantially change the tidal prism; therefore, the salinity gradient would not substantially change.	None
Channel Bank Modification Alternative		
Potential for Release of Sediment and Sediment-Borne Pollutants During Construction	Less than significant: (Same as Proposed Project)	None
Potential for Accidental Spills of Construction Materials	Less than significant: (Same as Proposed Project)	None
Potential Degradation of Water Quality as a Result of Channel Management Activities	Less than significant: (Same as Proposed Project)	None
Potential Discharge or Mobilization of Toxic Constituents—Mercury	Less than significant: Erosion and sediment control and soil management plans would avoid, minimize, and potentially reduce the transport and loading of mercury to the bay.	None
Potential for Increased Methyl Mercury Formation	Less than significant: (Same as Proposed Project)	None
Potential for Increased Water Temperature	Less than significant: (Same as Proposed Project)	None
Potential for Reduced Concentration of Dissolved Oxygen	Less than significant: (Similar to Proposed Project)	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
WATER QUALITY (Continued)		
Channel Bypass Alternative		
Greater amount of earthwork and longer construction times than under the Proposed Project; however, the environmental commitments would still apply. Possible greater benefits of removing more lead, mercury, and other contaminants from levee soils.		
Baylands Mitigation Measure[1]		
Potential for Increased Methyl Mercury Formation. It is possible that additional sediment would be trapped in the salt ponds and that flooding would promote organic-matter aquatic environments that could be conducive to methyl mercury formation.	Significant	*WQ-1: Develop and Implement Mercury Monitoring Plan.* The District will determine the partitioning of mercury in floodwaters, and recommend corrective measures.
HAZARDOUS MATERIALS		
No-Project Alternative		
No hazardous materials effects from ongoing maintenance.	No impact	None
Floodwalls/Levee Raise Alternative (Proposed Project)		
Construction Activities Affected by Exposure to Contaminated Soils	Less than significant: Precautions for proper handling and disposal of contaminated soils and groundwater would be built into the project design in accordance with regulatory standards as part of the environmental commitments.	None The following has been incorporated into the project design. **Soil Management Plan.** The soil management plan includes protocols for classifying the content of wastes in soil. These protocols are based on standard analytical tests used for the disposal of material at appropriately licensed disposal sites.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
HAZARDOUS MATERIALS (Continued)		
		The soil management plan has been updated to reflect the final project design and to incorporate input from the SFBRWQCB regarding management of soils containing elevated mercury concentrations (Kleinfelder 2001b). Additional restrictions on soil management are included in the soil management plan submitted to SFBRWQCB for its approval (Kleinfelder 2001b). **Hazardous and Toxic Materials Contingency Plan.** Disposal of material excavated from all hazardous, toxic, and radioactive waste (HTRW) sites discovered within the project limits of the LGRP will require special consideration. The District will develop a contingency plan outlining a course of action in the event that previously unidentified HTRW sites are uncovered during construction.
Construction Activities Affected by Contaminated Groundwater	Less than significant: Precautions for proper handling and disposal of contaminated soils and groundwater would be built into the project design in accordance with regulatory standards as part of the environmental commitments.	None. Mitigation is required beyond measures that have been incorporated into the project as environmental commitments.
Channel Bank Modification Alternative		
Construction Activities Affected by Exposure to Contaminated Soils	Less than significant: (Same as Proposed Project)	None
Construction Activities Affected by Exposure to Contaminated Groundwater	Less than significant: (Same as Proposed Project)	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
HAZARDOUS MATERIALS (Continued)		
Channel Bypass Alternative		
Potential impacts of hazardous materials on construction activities related to exposure to contaminated soil or groundwater would be greater than those described for the Proposed Project because construction of the bypass culverts would entail excavating both the east- and west-bank levees to site box culverts; however, the environmental commitments would still apply.		
Baylands Mitigation Measure[1]		
No hazardous materials investigations were conducted in the Alviso baylands area; however, mercury and other contaminants are presumed to be present.	Less than significant: (Same as Proposed Project)	None
VEGETATION		
No-Project Alternative		
Loss of Existing Habitats, including Sensitive Natural Communities. The No-Project Alternative assumes existing conditions, as well as what would be expected to occur in the foreseeable future under current maintenance practices if the Proposed Project or another alternative were not approved. No new structural flood-control features would be implemented under the No-Project Alternative; however, current vegetation management would continue to alter normal habitat recruitment.	Less than significant: Current practices would not substantially change existing vegetation conditions.	None

[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
VEGETATION (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential for Loss of Riparian, Wetland, and Ruderal Vegetation from Levee Construction and Channel Management Activities	Significant	*V-1: Replace or Compensate for Loss of Riparian and Wetland Habitat.* An implementation plan would be developed to ensure that the mitigation measure reduces this impact to less than significant. The implementation plan will be developed by the District to ensure that required mitigation plantings are successful and mitigation in Pond A4 is completed.
Potential for Loss of Riparian and Wetland Vegetation Resulting from Changes in Hydraulic Conditions	Less than significant: Although the Proposed Project would increase the channel capacity and water velocities in portions of the LGRP area, the increase would not be appreciable, and would represent a minimal increase over preproject conditions that would have minimal impacts on channel vegetation.	None
Loss of Special-Status Species or Potential Habitat for Special-Status Species	Less than significant: Eight listed species and 25 species of concern were identified as having the potential to occur in the LGRP area; however, none of these species have been observed or are expected to be found in the LGRP area because of a lack of suitable habitat. There would be impacts on special-status plant species downstream of the LGRP because these species are unlikely to occur in the area and would not be affected by infrequent flooding in and around Alviso Slough.	None
Potential for Loss of Ornamental Vegetation from Construction and Maintenance Activities	Less than significant: Ornamental vegetation is not considered a sensitive natural community; the quantity and quality of ornamental vegetation affected in the landscapes for surrounding commercial and residential developments would be fully replaced.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
VEGETATION (Continued)		
Potential Loss of Diked Salt Marsh Habitat in New Chicago Marsh	Less than significant: Flooding of the marsh habitat would be reduced to approximately 1.3 m (4.3 feet) deep.	None
Potential Loss of Marsh Vegetation within Alviso Slough Because of Flooding	Less than significant: The additional flow downstream of the UPRR bridge to the marina is not expected to affect the various tidal freshwater, brackish, or salt marsh habitats within the slough, all of which are adapted to brief inundation and changes in salinity resulting from freshwater intrusion.	None
Channel Bank Modification Alternative		
Potential for Loss of Riparian, Wetland, and Ruderal Vegetation from Levee Construction and Channel Management Activities	Significant	*V-1: Replace or Compensate for Loss of Riparian and Wetland Habitat.* (See above under Proposed Project)
Potential for Loss of Riparian and Wetland Vegetation Resulting from Changes in Hydraulic Conditions	Less than significant: Although the Channel Bank Modification Alternative would increase the channel capacity and water velocities in portions of the LGRP area, the increase would not be appreciable and would represent a minimal increase over preproject conditions that would have minimal impacts on channel vegetation.	None
Loss of Special-Status Species or Potential Habitat for Special-Status Species	Less than significant: Eight listed species and 25 species of concern were identified as having the potential to occur in the LGRP area; however, none of these species have been observed or are expected to be found in the LGRP area because of a lack of suitable habitat. There would be no impacts on special-status plant species downstream of the LGRP in the baylands study area for the same reasons as identified for the Proposed Project.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
VEGETATION (Continued)		
Potential for Loss of Ornamental Vegetation from Construction of Vegetation and Sediment Management Activities	Less than significant: (Similar to Proposed Project)	None
Channel Bypass Alternative		
Impacts on lower Guadalupe River riparian habitat would be slightly greater than under the Proposed Project because a larger construction zone would be required to build box culverts in both the east and west levees than to complete the Proposed Project. Impacts would be particularly severe in reach C, where riparian habitat that supports riparian wildlife species is located on the west bank in the channel.		
Construction impacts of this alternative on tidal and nontidal wetlands would be slightly greater than under the Proposed Project; culvert construction areas would encroach on wetlands in all reaches, and a level of initial and routine vegetation and sediment management similar to that of the Proposed Project would be needed.		
There would be no impacts on special-status plant species in the LGRP area under this alternative for the same reasons identified for the Proposed Project and Channel Bank Modification Alternative.		

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
VEGETATION (Continued)		
Baylands Mitigation Measure[1]		
Potential Loss of Habitat for Special-Status Plant Species	Less than significant: There is suitable habitat for 5 special-status plant species downstream of the LGRP area; however, all but 1, Congdon's tarplant, have been presumed absent in this area. This species is unlikely to occur in the impact area and adapts well in disturbed areas.	None
Potential for Loss of Vegetation and Wetlands from Construction and Operation of the Baylands Mitigation Measure	Significant	*V-2: Additional Replacement or Compensation for Loss of Riparian and Wetland Habitat.* The District will replace or compensate for wetland habitat lost from constructing an inlet weir and maintenance road and removing vegetation under the Baylands Mitigation Measure.
Potential for Impacts on Ruderal Habitats	Less than significant: The loss of ruderal habitat, whether permanent or temporary, is considered less than significant because ruderal habitats are common in the area.	None
WILDLIFE		
No-Project Alternative		
Potential for Adverse Effects on Common Wildlife Species Associated with Riparian, Wetland, and Upland Habitat Loss	Less than significant: Vegetation management practices would not substantially reduce existing habitat values or change the current conditions that could affect common wildlife species.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
WILDLIFE (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential for Adverse Effects on Common Wildlife Species Associated with Riparian, Wetland, and Upland Habitat Loss	Significant	*V-1: Replace or Compensate for Loss of Riparian and Wetland Habitat.* (See "Vegetation") *W-1: Avoid Nesting Raptors and Birds during Construction and Maintenance.* The District will perform preconstruction surveys to determine whether nesting birds, including raptors, special-status bird species, or migratory birds, are present.
WILDLIFE (Continued)		
		W-2: Provide an On-Site Biologist During Construction Phase. The District will require an on-site biologist to oversee important biological components of the project, including clearing, revegetation, conducting preconstruction surveys, placement of exclusion fencing, establishing buffers, monitoring water quality, and placing diversion structures.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
WILDLIFE (Continued)		
Temporary Disturbance and Possible Mortality of Common Wildlife Species	Less than significant: Construction of floodwalls and levees under the Proposed Project would primarily affect ruderal habitats and would have a minimal effect on the channel bottom and associated wetland or riparian habitats; initial and routine sediment management activities would take place outside an established low-flow channel buffer area; temporary and periodic use of heavy equipment in the LGRP area would not substantially change the amount of disturbance currently occurring in the area; vegetation protection measures are incorporated into the LGRP as environmental commitments; and the District would compensate for initial and periodic loss of channel vegetation that supports common wildlife species.	None
Potential for Loss of Special-Status Species or Potential Habitat for Special-Status Species	Less than significant: This potential impact on special-status species or their habitat resulting from the overall construction- and vegetation and sediment management-related activities is not likely to result in the mortality of species listed under the federal or California ESA, species of concern, or candidate species. The District would also require preconstruction surveys to ensure that no special-status wildlife species occur in the construction area.	None
Potential for Loss of Wildlife Habitat from Increased Flows in Alviso Slough	Less than significant: Hydrologic modeling conducted for the Proposed Project indicates that the increase in water surface elevation between the existing conditions during a 396-cms (14,000-cfs) event and the design flow of 481 cms (17,000 cfs) is less than 0.15 m (0.5 foot) between the UPRR bridge and the marina, and that downstream of the marina, there would be no increase in water surface elevation.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
WILDLIFE (Continued)		
Potential for Loss of Wildlife Habitat from Increased Flooding in New Chicago Marsh	Less than significant: Increased frequency of flooding in New Chicago Marsh under the Proposed Project is not expected because the Proposed Project would not change upstream river hydrology and none of the structural or nonstructural actions would change the frequency of flooding in New Chicago Marsh. The depth and duration of flooding in New Chicago Marsh under the Proposed Project would decrease.	None
Potential for Loss of Nesting Habitat for Breeding Birds from Increased Flooding in Ponds A5, A7, and A8W	Less than significant: The increased duration of flooding could result in loss of a breeding season in these ponds; however, the species that would be affected are expected to be able to find other suitable breeding habitat in the vicinity, and infrequent (under design-flow conditions) loss of a single breeding season is not expected to result in lasting impacts on any of the affected populations.	None
Potential for Impacts on Salt Marsh Harvest Mouse	Less than significant: The duration of flooding would decrease compared to existing conditions because it would take less time to empty the site by way of drains and pumping. The Proposed Project would also not increase the frequency of flooding in the marsh.	None
Impacts on Snowy Plover as a Result of Increased Flooding in Pond A8D	Significant	*HH-3: Pump Cargill Salt Ponds.* The District will pump floodwaters from the Cargill salt ponds and the USFWS Wildlife Refuge to reduce the depth and duration of floodflows in Ponds A5, A6, A7, A8D, and A8W to a lower level than would be expected in these ponds under existing conditions.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
WILDLIFE (Continued)		
Channel Bank Modification Alternative		
Potential for Adverse Effects on Common Wildlife Species Associated with Riparian, Wetland, and Upland Habitat Loss	Significant	*W-1: Avoid Nesting Raptors and Birds during Construction and Maintenance.* (See above under Proposed Project) *W-2: Provide an On-Site Biologist During Construction Phase.* (See above under Proposed Project)
Temporary Disturbance and Possible Mortality of Common Wildlife Species	Less than significant: (Similar to Proposed Project)	None
Potential for Loss of Special-Status Species or Potential Habitat for Special-Status Species	Less than significant: (Similar to Proposed Project)	None
Downstream Effects on Wildlife from LGRP Floodflows		*HH-3: Pump Cargill Salt Ponds.* (See above under Proposed Project)
Channel Bypass Alternative		
Slightly greater impacts on riparian wildlife species and particularly severe in reach C from removal of riparian habitat; slightly greater impacts on wetlands; other impacts on common wildlife species similar to the Proposed Project.		
Baylands Mitigation Measure[1]		
Potential Effects on Wildlife from Construction of the Alviso Levee	Less than significant: No known, or suspected, rare or sensitive species are likely to occur within the footprint of the proposed Alviso levee. Construction of the levee is not expected to disturb marsh vegetation, wetlands, habitat for special-status wildlife species, or individuals of special-status species.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
WILDLIFE (Continued)		
Potential Impacts on Salt Marsh Harvest Mouse. The construction footprint includes 121 m^2 (0.03 acre) of salt marsh and there is a remote possibility that the mice could be affected.	Significant	*V-2: Additional Replacement or Compensation for Loss of Riparian and Wetland Habitat.* (See "Vegetation")
Potential Wildlife Disturbance from Construction Activities	Significant	*W-1: Avoid Nesting Raptors and Birds during Construction and Maintenance.* (See above under Proposed Project)
Loss of Wildlife Habitat from Construction and Implementation of the Baylands Overflow Weir and Vegetation Management Actions	Significant	*V-2: Additional replacement or compensation for loss of riparian and wetland habitat.* (See "Vegetation")
Impacts on Western Burrowing Owl	Significant	*W-1: Avoid Nesting Raptors and Birds during Construction and Maintenance.* (See above under Proposed Project)
FISHERIES		
No-Project Alternative		
Potential for Minor Fish Habitat Changes. Impacts would include periodic disturbance, the removal of vegetation in areas adjacent to the low-flow channel, and possibly the temporary disturbance of sediment in limited areas, such as bridge approaches, where minor amounts of sediment are excavated in reaches B–E.	Less than significant: Streamflows would remain unchanged by the current management activities, and flow velocities and depths would be similar to those of existing conditions. Only minor sediment removal would occur in areas outside the low-flow channel, no SRA cover would be removed under the current sediment and vegetation management practices, and stream temperatures would not be changed.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
FISHERIES (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential for Changes in Fish Habitat from Construction of Floodwalls, Levees, and Other Structures	Less than significant: Construction activities could temporarily increase the input of fine sediment in the stream, but environmental commitments include standard construction measures to control the sediment. These measures would minimize this potential impact. Vortex rock weirs would stabilize the channel bottom and create plunge pools at several locations in an area immediately downstream of I-880 in reach A. These structures are expected to improve fish habitat by enhancing the pool/riffle sequence in this area of the channel. The construction of floodwalls and levees in reaches A–G would have no effect on fisheries resources because these structures would not require construction in or near the low-flow channel.	None
Potential for Changes in Fish Habitat from the Construction of a New SR 237 Bridge. Demolition of the eastbound SR 237 bridge and reconstruction of a new bridge to match the westbound bridge profile could create temporary construction-related impacts in the vicinity of the reach F low-flow channel.	Less than significant: The District would implement the measures to reduce the impacts on fish passage and fish habitat under "Environmental Commitments." The potential for construction-related impacts on fisheries resources during bridge replacement is considered less than significant because construction activities would be temporary, SRA cover would not be affected, permanent barriers to fish passage in the low-flow channel would not be created at this site, and in-channel bridge construction would be conducted during the summer when streamflows are low.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
FISHERIES (Continued)		
Potential for Changes in Fish Habitat and Anadromous Fish Migration from Construction and Operation of the SR 237 Bypass. Potential impacts on fisheries resources created by this option would include construction-related effects on fish habitat and fish-stranding issues in box culverts.	Less than significant: Temporary construction-related effects on fish habitat would most likely be construction-site sedimentation and the possible release of construction contaminants in the construction area from operation of heavy equipment. These effects would be minimized by implementing the environmental commitments. Depending on how the bypass culverts are designed, the migration of juvenile and adult fish would not be adversely affected by the change in flows in the lower Guadalupe River during periods when water enters the bypasses because the water depth necessary for migration would be maintained in the channel. The potential for fish to be swept downstream and become stranded is considered remote because the bypass culverts would extend for only a short distance (under the SR 237 eastbound lanes) and would be designed in a manner that does not create pools in the bypass culvert that could entrap fish during receding flows.	None
Potential for Changes in Fish Habitat and Anadromous Fish Migration from the Vegetation and Sediment Management Activities in Reaches A–G. Channel excavation that would be required for sediment removal in reaches B–E would also not affect streamside vegetation but could result in significant stranding impacts in excavated areas. Reach G excavation for vegetation removal would not affect streamside vegetation that supports fish but could result in significant stranding issues in excavated areas.	Significant: Removal of streamside vegetation at bridge approaches would be minor, and vegetation management would not affect streamside vegetation in other areas of reaches A–G because an established buffer area would be maintained adjacent to the low-flow channel. Potential for stranding in sediment management areas exists.	*F-1: Provide a Fish-Passage Connection.* The District will provide a passive connection between the excavated channels and the low-flow channel in reaches B, C, D, E, and G or in other areas where excavations are proposed in the future, thereby ensuring that ponding in excavated areas is avoided.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
FISHERIES (Continued)		
Channel Bank Modification Alternative		
Potential for Changes in Fish Habitat from Construction of Floodwalls and Channel Modification	Less than significant: Construction activities would temporarily increase the amount of fine sediment in the stream; however, standard construction-area sediment control measures, as identified under "Environmental Commitments," would minimize this potential impact. Minor impacts on sedimentation in the overbank areas could result from construction but could be minimized by standard construction-area sediment control measures, as identified under "Environmental Commitments." Construction of structures under this alternative would have minimal effects on streamside vegetation or low-flow channel conditions.	None
Potential for Changes in Fish Habitat and Anadromous Fish Migration from the Relocation of the Hetch Hetchy Aqueduct. The relocation of the invert structures of 2 Hetch Hetchy pipelines could be required before construction could begin on the channel bank modification structures at this location.	Less than significant: Fish-management criteria for the construction area, as described under "Environmental Commitments," would be followed to minimize the effect on migrating anadromous fish. The District would relocate and construct pipelines in the vicinity of the low-flow channel during summer months, when streamflows are low, water temperatures are high, and the conditions for fish migration are less than desirable.	None
Potential for Changes in Fish Habitat and Anadromous Fish Migration from Vegetation and Sediment Management Activities in Reaches A–G. Vegetation management that could affect fish habitat is the same as described for the Proposed Project in bridge approach areas, vegetation management areas, and sediment excavation areas.	Significant (Same as Proposed Project)	*F-1: Provide Fish-Passage Connection* (See above under Proposed Project)

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
FISHERIES (Continued)		
Channel Bypass Alternative		
Impacts on fisheries are similar to those of the Proposed Project; slightly greater construction-related impacts within and adjacent to levees; similar levels of vegetation and sediment management; greater impact on fish habitat near low-flow channel; and greater potential for fish stranding.		
Baylands Mitigation Measure[1]		
Potential for Changes in Fish Habitat and Anadromous Fish Migration from the Baylands Mitigation Measure	Less than significant: Only minor amounts of habitat could potentially be affected. The frequency of flooding in the salt ponds would be similar to existing conditions; therefore, the impact of the Proposed Project on anadromous fish stranding with and without the Baylands Mitigation Measure would be less than significant.	None
LAND USE AND PLANNING		
No-Project Alternative		
Potential for Conflicts with Existing and Proposed Land Uses and Policies. This alternative is generally inconsistent with District and City policies to provide adequate flood protection for adjacent land uses, and with City policies to provide increased recreation and public access to the river corridor.	Significant and unavoidable	None available

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
LAND USE AND PLANNING (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential for Conflicts with Existing and Proposed Land Uses	Less than significant: The LGRP is not under the jurisdiction of a habitat conservation plan or community conservation plan, and does not significantly conflict with any applicable federal, state, or tribal land use plan or relevant policies. All construction activities would be within the ROW; there would be no direct impacts on existing land uses from construction of floodwalls and levees. Construction nuisances would be temporary, most of the construction under the Proposed Project would be on existing levee structures, and construction equipment would operate a substantial distance from most sensitive land uses.	None
Consistency with Local Plans and Policies	Less than significant: Flood-control features would be contained within the District's ROW and would not directly conflict with any planned development.	None
Potential for Construction-Related Nuisances from Raising the SR 237 Bridge	Less than significant: Bridge construction effects would be temporary, few sensitive land uses are located near the bridge, and the District would implement measures, in coordination with Caltrans, to minimize construction-related impacts.	The following environmental commitments to minimize construction-related impacts have been built into the project design. No further mitigation would be required. --Implement BAAQMD's Feasible Control Measures for PM10 Emissions from Soil Removal Activities. --Measures to Address Traffic-Related Effects. --Noise-Reducing Construction Practices.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
LAND USE AND PLANNING (Continued)		
Potential for Land Use Conflicts from Construction of SR 237 Bypass Culvert Option	Significant	*LU-1: Install Safety Measures.* To ensure the safety of the residents of the mobile home park located adjacent to the proposed levee extension in reach F, a safety rail or fence will be added to the top of the retaining wall in the vicinity of the mobile home park, and access to the retaining wall on the south levee will be restricted to ensure that residents or other recreation users of the levees cannot access this area during flood events.
Depending on the design and height of the new retaining wall, the potential exists for safety concerns associated with the proximity of residential development near flood-control structures.		
Channel Bank Modification Alternative		
Potential for Conflicts with Existing and Proposed Land Uses	Less than significant: Construction nuisances would be temporary, most of the construction under this alternative would be on the inboard toe of existing levee structures, and construction equipment would operate a substantial distance from most sensitive land uses. In addition, implementation of environmental commitments that are built into the project design would further minimize impacts.	None
Consistency with Local Plans and Policies	Less than significant: The Channel Bank Modification Alternative would be consistent with local land use policies because flood-control features would be contained within the District's ROW and would not directly conflict with any planned development.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
LAND USE AND PLANNING (Continued)		
Channel Bypass Alternative		
The potential for conflicts with existing and proposed land uses could be greater than conflicts identified for the Proposed Project. This more complicated, more extensive construction activity would create a longer period of construction nuisances than under the Proposed Project. The Channel Bypass Alternative would also potentially require acquisition of new ROW for construction of bypass culverts at bridge crossings (i.e., Trimble Road). Construction in areas outside existing District ROW could result in direct conflicts with existing and planned land uses.		
Baylands Mitigation Measure[1]		
Potential for Conflicts with Existing and Proposed Land Uses	Less than significant: Construction of the proposed structures would not require a change in any current land use.	None
Potential conflicts with Alviso Marina because of the changes in design features associated with the change in levee elevation. The Baylands Mitigation Measure would create a significant impact on the planned Alviso Marina County Park.	Significant	*LU-2: Design Floodwalls or Levees to Accommodate Park Design.* The District will design the floodwalls or levees to accommodate the park design and coordinate with the County to ensure that construction of flood-control facilities does not interfere with planned use of this facility.
RECREATION, PUBLIC ACCESS, AND VISUAL RESOURCES		
No-Project Alternative		
No new impacts on recreation, public access, or visual resources	No impact	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
RECREATION, PUBLIC ACCESS, AND VISUAL RESOURCES (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Potential Changes in Recreation Opportunities and Access. Construction of backwalls may affect current informal access to levee roads in reaches C-G.	Less than significant: Current use of LGRP levee roads is informal, and the District would accommodate future connections to these and other planned regional recreation trails.	None
Conflicts with Existing and Planned Recreation Facilities	Less than significant: The Proposed Project would not result in direct impacts on planned recreational facilities because none are proposed in the LGRP area and construction would not affect adjacent recreational facilities.	None
Potential for Disruption of Recreational Use from Construction and Management Activities. During periodic sediment and vegetation management activities, disruptions of current informal recreational use of levee roads and of views from these roads could result from increased noise, dust, equipment operation, and accessibility to levees.	Less than significant: Construction activities would be temporary, current use is informal only, and the potential for future trail improvements would ultimately benefit recreationists.	None
Potential for Changes in Visual Resources and Views from Flood-Control Structures. These structural changes would result in a slight change in visual resources in the river corridor but would generally be congruent with existing flood-control and bridge elements.	Less than significant: The extent and height of flood-control modifications has been minimized under the Proposed Project, the new structures would be located in areas of the river that are already developed, and the modifications would be constructed in areas that avoid substantial disruption of the vegetated portion of the channel and low-flow channel. Changes in levee vegetation would be temporary and vegetation would be reestablished.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
RECREATION, PUBLIC ACCESS, AND VISUAL RESOURCES (Continued)		
Potential for Changes in Visual Resources and Views from Management Activities. Changes to visual resources would be most apparent at bridge approaches, where vegetation growth would be reduced substantially to ensure conveyance capacity and in sediment excavation areas in reaches B–E.	Less than significant: Visual changes would take place in established sediment and vegetation management areas and riparian and wetland vegetation adjacent to the low-flow channel for all reaches would be preserved in buffer zones. Periodic vegetation and sediment management would also be conducted in alternating areas from the east bank to the west bank to intersperse maintenance areas with more vegetated areas in all reaches.	None
Channel Bank Modification Alternative		
Potential Changes in Recreation Opportunities and Access	Less than significant: (Similar to Proposed Project)	None
Conflicts with Existing and Planned Recreation Facilities	Less than significant: (Similar to Proposed Project)	None
Potential for Disruption of Recreational Use from Construction and Management Activities	Less than significant: (Similar to Proposed Project)	None
Potential for Changes in Visual Resources and Views from Flood-Control Structures. These structural changes would result in substantial changes in visual resources in the river corridor.	Significant	*RV-1: Plant Vegetation After Construction.* The District would construct MSE walls in a manner that would allow for vegetative plantings that would soften the look of channel modification structures.
Potential for Changes in Visual Resources and Views from Channel Management Activities. Changes to visual resources would result primarily from the loss or reduction of natural vegetative cover and would be visible primarily from levee roads, at bridge crossings, within the channel, and from the air.	Less than significant: Visual changes would take place in established sediment and vegetation management areas, and riparian and wetland vegetation adjacent to the low-flow channel for all reaches would be preserved in buffer zones.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
RECREATION, PUBLIC ACCESS, AND VISUAL RESOURCES (Continued)		
Channel Bypass Alternative		
No substantial impacts on recreation access would result from this alternative once bypass culverts are built and levees are in place because it would be possible to provide access similar to what is currently provided. Changes in visual resources during construction of the channel bypass would be greater than under the Proposed Project because of the extensive levee work that would be required. Changes in visual resources from vegetation and sediment management would be similar to those of the Proposed Project.		
Baylands Mitigation Measure[1]		
Potential for Changes in Visual Resources and Views from Flood-Control Structures	Less than significant: The proposed location of the inlet weir is not viewed frequently, past levee breaks have already disturbed the area, and vegetation management in this area would be in a relatively small isolated area in the slough environment.	None
TRANSPORTATION AND TRAFFIC		
No-Project Alternative		
No interruption of traffic patterns or transportation conflicts. Vegetation management would continue throughout the reaches of the lower Guadalupe River.	No impact	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
TRANSPORTATION AND TRAFFIC (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Short-Term Increase in Traffic Volumes Resulting from Construction-Related Activities. Project construction activities would temporarily affect traffic on local roadways by adding vehicle traffic associated with commute trips by construction workers and trips by those using construction vehicles and delivering construction materials, and by increasing congestion levels on local roadways traveled by project-related traffic during peak- and nonpeak-hour driving periods.	Less than significant: The number of construction-related trips would not substantially change the capacity of the roadways.	None
Deterioration of Roadway Surfaces	Less than significant: The number of construction-related trips generated by the alternative would not substantially increase the number of vehicle trips on the roadway system.	None
Potential for Roadway Safety Hazards. Slow-moving trucks hauling construction equipment and excavated materials in and out of the river channel would create visual impediments for motorists on roadways.	Less than significant: The project proponent would require the construction contractor to prepare and implement a traffic safety plan during the construction phase of the project. The traffic safety plan would include a comprehensive traffic/transportation control plan. The District would also require construction contractor to limit fill and material delivery to the construction sites to nonpeak commute hours.	None
Increased Delay for Traffic Traveling Across the SR 237 Bridge. During the construction period, the shifting of eastbound traffic to other designated sections of the bridge would result in reduced travel speeds and potential delays for vehicles traveling through individual work zones associated with bridge-replacement activities.	Significant and unavoidable	None available

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
TRANSPORTATION AND TRAFFIC (Continued)		
Channel Bank Modification Alternative		
Short-Term Increase in Traffic Volumes Resulting from Construction-Related Activities	Less than significant: (Similar to Proposed Project)	None
Deterioration of Roadway Surfaces	Less than significant: (Similar to Proposed Project)	None
Potential for Roadway Safety Hazards	Less than significant: (Same as Proposed Project)	None
Channel Bypass Alternative		
The more complicated construction of bypass culverts under this alternative would require a greater number of construction trips involving heavy equipment and construction workers for a longer construction period than identified for the Proposed Project. Potential delays at SR 237 from this construction activity could be similar to those identified for the Proposed Project, depending on the amount of time that the eastbound SR 237 bridge would be subject to construction activities.		
Baylands Mitigation Measure[1]		
The proposed construction activities in the baylands would have no effect on transportation and traffic.	No impact	None
AIR QUALITY		
No-Project Alternative		
Existing conditions would remain generally unchanged. No new impacts on air quality would result from continued implementation of District management strategies in the project area.	No impact	None

[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
AIR QUALITY (Continued)		
Floodwalls/Levee Raise Alternative (Proposed Project)		
Construction-Related Air-Polluting Emissions. Construction of the Proposed Project, including excavation, earthmoving, and hauling of excavated soil to landfills or other disposal sites, is expected to generate air-polluting emissions.	Less than significant: The project incorporates all feasible PM10 control measures required by the BAAQMD. The District will implement the project's environmental commitments, including the BAAQMD's provisions for PM10 control. These environmental commitments will reduce construction-related impacts on air quality to a less-than-significant level.	None
Channel Bank Modification Alternative		
Construction-Related Air-Polluting Emissions. Construction of the Channel Bank Modification Alternative, including excavation, earthmoving, and hauling of excavated soil to landfills or other disposal sites, is expected to generate slightly greater air-polluting emissions than construction of the Proposed Project.	Less than significant: The project incorporates all feasible PM10 control measures required by the BAAQMD. The District will implement the project's environmental commitments, including the BAAQMD's provisions for PM10 control. These environmental commitments will reduce construction-related impacts on air quality to a less-than-significant level.	None
Channel Bypass Alternative		
Impacts from construction-related air-polluting emissions would be greater than under the Proposed Project because more extensive earth-moving construction activities would be required to remove existing levees and site bypass culverts, and then reconstruct levees.	Less than significant: (Same as Proposed Project)	

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
AIR QUALITY (Continued)		
Baylands Mitigation Measure[1]		
Construction-Related Air-Polluting Emissions. Construction of flood-control structures include excavation; earthmoving; and hauling excavated soil from construction of inlet weirs, outlet culverts, and levees or floodwalls.	Less than significant: (Same as Proposed Project)	None
NOISE		
No-Project Alternative		
Existing conditions would remain generally unchanged. No new noise impacts would result from the continued implementation of District management strategies in the project area.	No impact	None
Floodwalls/Levee Raise Alternative (Proposed Project)		
Temporary Increase in Noise Levels Resulting from General Construction Activities. General construction activities involved with grading and contouring banks and with constructing floodwalls or raising levees would result in a temporary increase in noise levels in the LGRP area. Construction activities associated with either demolition and construction of the SR 237 eastbound bridge or construction of the bypass culvert under the bridge would have temporary but long-term noise impacts on residences and other sensitive noise receptors within the vicinity of the bridge.	Less than significant: The maximum duration of construction-related noise impacts would be 3-4 weeks and a temporary sound barrier would be constructed at SR 237. Implementation of the project's environmental commitments would reduce this impact to a less-than-significant level.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
NOISE (Continued)		
Temporary Increase in Noise Levels Resulting from Pile-Driving Activities. Operation of a pile driver would result in a temporary increase in noise levels during daytime hours.	Less than significant: The maximum duration of construction-related noise impacts would be a 3-4 weeks and a temporary sound barrier would be constructed at SR 237. Exposure would be temporary and only during daytime hours; implementation of the project's environmental commitments would further reduce noise levels.	None
Channel Bank Modification Alternative		
Temporary Increase in Noise Levels Resulting from Construction Activities. Excavation and construction necessary for the possible relocation of the Hetch Hetchy Aqueduct would produce additional noise. Noise levels are expected to be similar to those described for the Proposed Project except that most of the construction activity under this alternative would occur on the inboard side of levees in reaches D–G.	Less than significant: (Same as Proposed Project)	None
Temporary Increase in Noise Levels Resulting from Pile-Driving Activities. (Similar to that described for the Proposed Project.)	Significant and unavoidable	None
Channel Bypass Alternative		
Temporary increases in noise levels from construction activities would be similar to those under the Proposed Project except that increased construction noise levels would last longer than under the Proposed Project because the project would take longer to complete. The same measures identified for the Proposed Project would be required for this alternative.		

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
NOISE (Continued)		
Baylands Mitigation Measure[1]		
Activities in the baylands associated with the LGRP would include the possible construction of a weir within specific areas of the Cargill salt ponds. Activities within close proximity to Alviso and noise-sensitive receptors include construction of levees and a floodwall.	Less than significant: Any construction activities would be temporary and short-term and would be far enough from noise-sensitive receptors to have a less-than-significant impact on noise levels. Implementation of the project's environmental commitments would further reduce noise levels.	None
PUBLIC SERVICES AND UTILITIES		
No-Project Alternative		
Routine maintenance for vegetation control would continue in reaches A–G. Routine maintenance for vegetation control would have no effect on public services or utilities.	No impact	None
Floodwalls/Levee Raise Alternative (Proposed Project)		
Possible Temporary Disruption in Public Utilities from LGRP Construction. Construction and structural elements associated with the Proposed Project, such as contouring the riverbanks, constructing floodwalls, and raising the SR 237 bridge, have the potential to temporarily disrupt public services and utilities, including water, wastewater, gas, electricity, telephone, and cable television.	Less than significant: The District would coordinate with utility companies and contact service providers before construction begins to ensure that utility lines or services are not affected by LGRP construction as part of the environmental commitments.	None
Potential for Delay in Emergency Response Times During SR 237 Bridge Construction. The potential exists for delays in emergency response times related to restrictions in traffic flow across the bridge during nonpeak hours because some of the traffic lanes may need to be closed during parts of the day.	Less than significant: The LGRP would be required to implement a traffic control plan that meets Caltrans requirements as part of the environmental commitments.	None

[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
PUBLIC SERVICES AND UTILITIES (Continued)		
Channel Bank Modification Alternative		
Possible Temporary Disruption in Public Utilities from LGRP Construction. The temporary impacts on public utilities and services from construction of floodwalls, backwalls, and channel bank modification structures associated with the Channel Bank Modification Alternative would be similar to those of the Proposed Project. The Channel Bank Modification Alternative could also require realignment of the Hetch Hetchy Aqueduct pipelines at the boundary separating reaches D and E, but these pipelines would be realigned one at a time to provide uninterrupted service.	Less than significant: (Same as Proposed Project)	None
Channel Bypass Alternative		
There would be greater impacts on public utilities that cross the District's ROW than identified for the Proposed Project because siting bypass culverts would require excavating areas under the invert of levees that would not be affected under the Proposed Project. This alternative would also have the impact of delays in emergency response times similar to that of the Proposed Project because construction of bypass culverts at SR 237 and other bridges would most likely result in construction-related traffic delays.	Less than significant (Same as Proposed Project)	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
PUBLIC SERVICES AND UTILITIES (Continued)		
Baylands Mitigation Measure[1]		
Construction activities associated with the Baylands Mitigation Measure would be concentrated near Alviso and the Cargill salt ponds. Because there are no utilities other than overhead electrical lines, there would be no impact on public services or utilities associated with construction activities.	No impact	None
CULTURAL RESOURCES		
No-Project Alternative		
Potential Disturbance of Historic Properties	Less than significant: No new impacts on known or undiscovered archaeological or historic resources would result because the existing levees are composed of material that was imported or is highly disturbed and therefore has little or no archaeological significance. In addition, recently deposited sediments are not archaeologically significant. There are no historic resources in the river channel that could be affected by routine maintenance activities.	None

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
CULTURAL RESOURCES (Continued)		
Floodwall/Levee Raise Alternative (Proposed Project)		
Potential Disturbance of Previously Recorded Archaeological Deposits in Reaches B and C. Potential excavation, drilling, or pile driving for retaining-wall-foundation construction on the west outboard levee bank in reaches B and C has the potential to result in impacts on archaeological sites SCL-762 and SCL-492.	Significant	*CR-1: Monitor all Excavation.* Archaeological and Native American monitoring plans will be set forth in detail in the cultural resources PA for the project.
Potential Disturbance of Undiscovered Cultural Resources in Reaches A–C. Potential excavation, drilling, or pile driving for retaining wall foundation construction could affect buried historic structures and undiscovered archaeological resources on both sides of reaches A–C. Several historic structures appear in the archival record on both sides of the river in these areas.	Significant	*CR-1: Monitor all Excavation.* (See above under Proposed Project)
Potential Disturbance of Previously Recorded Archaeological Deposits and Historic Architectural Features in Reaches D–G. Potential excavation, drilling, or pile driving for retaining-wall-foundation construction could be required on the east and west outboard levee banks in reaches D–G in areas where floodwalls or levee raising is required.	Significant	*CR-1: Monitor all Excavation.* (See above under Proposed Project) *CR-2: Avoid Vibrational Impacts on the Alviso Historic District.* The District will avoid potential vibrational impacts on Alviso Historic District structures in the vicinity of reach G by prohibiting use of pile drivers for foundation construction on the reach-G levees.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
CULTURAL RESOURCES (Continued)		
Potential Effect of Construction Staging Areas on Previously Recorded Archaeological Deposits and Historic Architectural Features. Use of staging area 5 could disturb site CA-SCL-276. Use of staging area 10 could disturb site CA-SCL-6W.	Significant	*CR-3: Restrict Site Used for Staging Areas.* The District will restrict use of staging areas 5 and 10 in areas where known cultural resources are located, either by not using these sites as staging areas during LGRP construction or by using only portions of these sites that are outside the known boundaries for these resources.
Potential Disturbance of Undiscovered Cultural Resources in Reaches D–G. Construction activities have the potential to result in impacts on undiscovered cultural resources, including archaeological deposits and historic features on both the east and west banks of the river, along the SR 237 bridge corridor, and at any locations proposed for ancillary construction or construction support.	Significant	*CR-1: Monitor all Excavation.* (See above under Proposed Project) *CR-4: Avoid Impacts on Sensitive Subsurface Archaeological Resources.* The District will avoid impacts on sensitive subsurface archaeological resources, particularly near the SR 237 bridge construction area, by ensuring that no construction takes place in these sensitive areas before subsurface testing clearly indicates that no impacts on sensitive archaeological resources would result from project construction.

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
CULTURAL RESOURCES (Continued)		
Channel Bank Modification Alternative		
Potential Disturbance of Previously Recorded Archaeological Deposits and Historic Architectural Features in Reaches B–G. Potential excavation, drilling, or pile driving for retaining-wall-foundation construction (on the back side of the levees) at bridge approaches and in reaches D–G for the channel modification structures could result in disturbance to previously recorded archaeological and historic sites in a manner similar to that indicated for the Proposed Project. Construction activity could disturb 3 archaeological sites on the west bank.	Significant	*CR-1: Monitor all Excavation.* (See above under Proposed Project) *CR-2: Avoid Vibrational and Visual Resource Impacts on the Alviso Historic District.* (See above under Proposed Project)
Potential Disturbance of Previously Recorded Archaeological Deposits and Historic Architectural Features at the Hetch Hetchy Aqueduct Crossing. The potential need to relocate Hetch Hetchy pipelines could result in significant impacts on a large prehistoric site, CA-SCL-6W. In addition, the aqueduct itself is a feature of a historically important water-conveyance system that may be eligible for listing in the NRHP.	Significant	*CR-5: Perform Preconstruction Archaeological Test Excavation.* Preconstruction archaeological test excavation will be performed on the west bank in the southern end of CA-SCL-6W, adjacent to both sides of the aqueduct, to determine whether the site extends into the area that would be affected by the relocation.
CULTURAL RESOURCES (Continued)		
Potential Effect of Construction Staging Areas on Previously Recorded Archaeological Deposits and Historic Architectural Features	Significant	*CR-3: Restrict Site Used for Staging Areas.* (See above under Proposed Project)
Potential Disturbance of Undiscovered Cultural Resources	Significant	*CR-1: Monitor all Excavation.* This mitigation is the same as identified for the Proposed Project, except that mitigation of activities associated with replacing the SR 237 bridge would not be required.
Channel Bypass Alternative		

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[1] CEQA requires identification of impacts that would result from mitigation measures.

Table S-1. Continued

Impact	Level of Significance	Recommended Mitigation Measure(s)
Under the Channel Bypass Alternative, excavation required to site bypass culverts in existing lower Guadalupe River levees would substantially increase the potential for impacts on recorded and unrecorded archaeological and historic sites in reaches B–G compared to the Proposed Project. Siting bypass culverts would require excavation of native material under the west-bank levees from U.S. 101 to the UPRR bridge and under east-bank levees from Montague Expressway to the UPRR bridge. All the recorded sites in these reaches would most likely be significantly affected by construction activities, and all the mitigation measures identified for the Proposed Project would need to be implemented for a larger number of recorded and unrecorded sites. Implementing the Channel Bypass Alternative would also require relocating the Hetch Hetchy pipelines in a manner similar to that discussed for the Channel Bank Modification Alternative.		

[1] CEQA requires identification of impacts that would result from mitigation measures.

Impact	Level of Significance	Recommended Mitigation Measure(s)
CULTURAL RESOURCES (Continued)		
Baylands Mitigation Measure[1]		
Potential Disturbance of Previously Recorded Cultural Resources. Several of the historic structures associated with the Alviso Historic District are in close proximity to the existing levees and could suffer direct impacts as a result of excavation or construction on the inboard side of the levee, or expansion of the levee footprint. The impacts associated with the small levee from UPRR to Alviso Marina also have the potential to result in visual impacts on the Alviso Historic District.	Less than significant: Avoidance is the preferred measure to reduce potential effects from the Baylands Mitigation Measure on the Alviso Historic District. Because this levee would not be raised substantially (i.e., less than 0.31 m [1 foot]) along the Alviso perimeter in the vicinity of standing historic structures, a significant impact on the historic district is not expected.	None
Potential for Disturbance of Unrecorded or Undiscovered Archaeological Sites or Historic Features. Mitigation measures required in the baylands have the potential to result in significant impacts if they would disturb or destroy unrecorded historic features, or if they would result in disturbances to native soil adjacent to or beneath the levees, where undiscovered or unrecorded historic or prehistoric archaeological deposits could be present. The Baylands Mitigation Measure would entail construction of an inflow weir in the Pond A8W levee and could result in an increase in the depth of flooding of these ponds.	Significant	*CR-1 Monitor all Excavation.* (See above under Proposed Project) Before the development of final engineering for the Baylands Mitigation Measure, detailed archival research, an archaeological records search, and archaeological survey would be carried out for the new levee and weir site. Any potentially historic sites, structures, or features identified would be subject to full recordation and evaluation for eligibility to the NRHP. Appropriate mitigation measures would be developed and carried out in consultation with the Corps and the SHPO for any historic properties that would be adversely affected by the project, consistent with the stipulations of the cultural resources PA.

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[1] CEQA requires identification of impacts that would result from mitigation measures.